

# GEI Consultants, Inc.

# Drum Removal Release Abatement Measure Status Report No. 2 and Completion Statement

Olin Property Wilmington, MA RTN 3-0471



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SUBMITTED TO

Olin Environmental Management Inc.

1186 Lower River Road, NW Charleston, TN 37310-0248

M. Margret Hanley, LSP

LSP of Record

July 12, 2001 Project Number 97598

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1. Proposed Work and Work Completed Through May 2001

#### **Appendices**

- A. MADEP RAM Status Report Transmittal Form
- B. RAM Approval Letter
- C. Permits
- D. Results of Disposal Testing
- E. Off-site Disposal Shipping Documents
- F. Air Monitoring Data and Records

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## **Executive Summary**

The purpose of the Drum Removal Release Abatement Measure (RAM) was to remove buried drums, parts of drums, and other debris reported to be present in two areas, referred to as Drum Areas A and B, at the southern end of the developed portion of the Olin Corporation (Olin) Property.

Between August 7, 2000 and May 2001, the following activities were performed as part of the RAM:

- Excavation of approximately 3,200 cubic yards (cy) of soil; 160 overpacks of old drums, crushed drums and drum parts; and 34 tons of metal debris from Drum Area A.
- Collection and chemical analysis of 34 confirmatory soil samples from the Drum Area A excavation base and sidewalls.
- Backfilling of Drum Area A with a mixture of excavated soil, blast rock, and suitable on-property borrow.
- Excavation of approximately 1,150 cy of soil; 3 overpacks of drum parts; and 2 tons of metal debris from Drum Area B. No intact drums were encountered in Drum Area B.
- Collection and chemical analysis of 16 confirmatory soil samples from the Drum Area B excavation base and sidewalls.
- Backfill of Drum Area B with excavated soil and suitable on-property borrow.
- Treatment of contaminated groundwater and surface water associated with the Drum Area A excavation.
- Off-site disposal of 5 rolloffs containing the most contaminated soil excavated from Drum Area A.
- Off-site disposal of a total of approximately 54 tons of metal debris excavated at the Site. This amount includes approximately 50 tons from the Drum Area excavations and approximately 4 tons of additional metal debris encountered during other concurrent, remediation work performed at the Property.

- Preparation of Drum Removal RAM Status Report No. 1, dated December 22, 2000. Status Report No. 1 was submitted to MADEP at the end of December, 2000.
- Characterization and off-site disposal of 163 over packed drums and drum remnants recovered from the excavation areas.
- Characterization and off-site disposal of approximately 200 cy of soil from Drum Area A.
- Evaluation of Meteorological and Air Monitoring data collected during field activities associated with the RAM.

It is my opinion that these activities were performed in substantial accordance with the RAM Plan and the Massachusetts Department of Environmental Protection (MADEP) conditional approval of the RAM Plan, dated February 14, 2000.

As described in Status Report No. 1, the following minor modifications to the RAM Plan were made:

- Excavated soil with moderate levels of contamination based on field screening was stockpiled on a lined, bermed pad located east of the warehouses, instead of on two sheets of plastic as proposed in the RAM. The pad was used because it was a more secure storage system than plastic sheets.
- Plastic sheets were not placed below excavated soil stockpiles with low levels of contamination because these stockpiles were located within the Containment Area and plastic covers alone were sufficient to minimize potential contaminant leaching.
- Dewatering effluent from Drum Area A was treated using a mobile treatment plant instead of the Plant B treatment system. This change was made because the mobile treatment plant, which was initially setup to treat dewatering effluent from the concurrent ditch excavations, was more convenient to use than the Plant B treatment system. All treated water was managed in accordance with a National Pollution Discharge and Elimination Service (NPDES) Permit Exclusion. Monitoring data for the NPDES Permit Exclusion are summarized in the Part 2 RAM Status Report No. 1.
- Dewatering effluent from Drum Area B was recharged adjacent to the excavation within the Containment Area. This was done because the volume of water was small and consisted primarily of storm water.

Arsenic was eliminated from the confirmatory testing suite because the inclusion of arsenic as a site-related Contaminant of Concern (COC) in the RAM Plan was an error. The parameters reactivity, ignitability, and pH were also eliminated based on field observations.

It is my opinion that these deviations are not significant, and have not affected the integrity of the RAM activities.

As a result of the Drum Removal RAM, a potential Substantial Hazard, as defined in the Massachusetts Contingency Plan (310 CMR 40.0000 [MCP]), at the Olin Property has been eliminated. Buried drums and debris known or suspected to be present in the Drum Areas have been excavated and removed for characterization and/or off-site disposal. Confirmatory soil sampling from the excavation base and sidewalls of each area demonstrates that remaining soils exhibit concentrations of site-related contaminants that are well below the Upper Concentration Limits (UCLs), and in most cases below the S-3 soil standards listed in the MCP.

Information presented in this document and the previous Status Report No. 1 support the filing of a RAM Completion Statement in accordance with the applicable provisions of the MCP (310 CMR 40.0440).

#### 1. Introduction

#### 1.1 Background

This document is the final Status Report and Completion Statement for the Drum Removal Release Abatement Measure (the RAM) at the Olin Property at 51 Eames Street in Wilmington, Massachusetts (the Property). A plan of the Property showing the location of the Drum Removal Areas is presented as Figure 1. The Property is part of the area that constitutes the entire Olin Site (RTN 3-0471). The Olin Site is a Tier 1A Site, as defined in the MCP. Separate MADEP-approved response actions are ongoing for areas of the Olin Site beyond the Property. The original RAM Status Report transmittal form (BWSC-106) for this document is attached and a copy is contained in Appendix A. This Status Report includes work performed between December 9, 2000, and May 2001.

These activities were performed concurrent with a separate RAM to excavate contaminated ditch sediments and install a subsurface containment wall around the on-property DAPL, referred to as the Part 2 Construction Related RAM Plan (Part 2 RAM). The Part 2 RAM Plan is ongoing, and separate status reports for the Part 2 RAM have and will be submitted to MADEP in the future.

Under an existing Immediate Response Action (IRA), remedial actions were performed at the Plant B area of the Property concurrent with this RAM. The Plant B IRA that occurred between January and July 2001 includes the operation of a groundwater recovery and treatment system and installation and Pilot Testing of a soil-vapor extraction system. These activities will be summarized in a IRA Status Report that will be submitted to MADEP in July 2001.

#### 1.2 Contact Information

Responsibility for the Construction-Related RAM Steve Morrow, P.E. Olin Corporation 1186 Lower River Road Charleston, TN 37310 423.336.4511

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#### 1.3 RAM Objective

The objective of this RAM is the excavation and removal of buried drums, debris, and associated impacted soil from two areas (Drum Areas A and B) at the Property. The removal of the drums and debris, and associated contaminated soil was required to eliminate a potential substantial hazard as defined in the MCP, and to eliminate exceedances of Upper Concentration Limits (UCLs) in soil.

#### 2. Plans and Permits

#### 2.1 RAM Plan

The RAM Plan for this work was submitted to MADEP on January 18, 2000. The RAM Plan was conditionally approved by MADEP on February 14, 2000. A copy of the approval letter is contained in Appendix B. The locations that are the subject of this RAM Plan (Drum Areas A and B) are depicted on Figure 1. Site features that are relevant to the implementation of this RAM Plan, including the locations of soil, debris, and overpack staging areas, and the mobile water treatment system, are also depicted on Figure 1.

#### 2.2 RAM Plan Modifications

MADEP's conditional approval of the January 18, 2000 RAM Plan requested that an area located east of and adjacent to Drum Area A, referred to as the Buried Debris Area, be excavated as part of this RAM. However, the Buried Debris Area is located within portions of the On-Property West Ditch Wetland, which is subject to the Part 2 RAM Plan. Therefore, the Buried Debris Area excavation was incorporated into the Part 2 RAM. There were no other significant modifications of the RAM Plan that required MADEP notification or approval. Minor notifications made during the course of the following RAM are described in the following text.

#### 2.3 Other Permits

Implementation of this RAM required that an Order of Conditions be granted by the town of Wilmington for work in and near wetland areas. The Order of Conditions was granted on February 17, 2000. A copy of the Order of Conditions is contained in Appendix C. Dewatering during the implementation of this RAM was performed in accordance with a National Pollution Discharge Elimination System (NPDES) Permit Exclusion issued to Olin Corporation by the U.S. Environmental Protection Agency (USEPA) for construction dewatering the Part 2 RAM. A copy of the NPDES Permit Exclusion is contained in Appendix C.

#### 3. Status of RAM Activities

#### 3.1 Drum Area A

Drum Area A is located at the west-central part of the Property, as depicted in Figure 1.

The excavation and removal of drums and debris from Drum Area A occurred between August 15 and October 7, 2000. Details of the excavation of Drum Area A were presented in Status Report No. 1 dated December 22, 2000. In summary, Drum Area A was excavated to an average depth of 8 feet below the ground surface (bgs). The total excavation volume in this area was approximately 3,200 cy. Based on visual and jar headspace screening in the field with a photoionization detector (PID), excavated soil was segregated into three categories: visibly stained soil which was placed in five 20-cy roll-off containers; moderately contaminated soil which was placed on the lined pad east of the warehouses in 150-cy stockpiles; and soil with little or no evidence of contamination which was placed in covered 250-cy stockpiles south of the excavation and within the Containment Area. The location of the Containment Area is shown on Figure 1.

All of the soil stockpiles were tested for semivolatile organic compounds (SVOCs), volatile organic compounds (VOCs), pesticides, cadmium, chromium, and lead to establish potential suitability for on-Property reuse. The sampling methods and results of the reuse testing are summarized in Status Report No. 1. Based on the results of the reuse testing, all of the stockpiled soil from Drum Area A was suitable for reuse. About 500 cy of soil stockpiled within the Containment Area was used to backfill Drum Area B. The remainder of the soil stockpiled within the Containment Area and most of the soil stockpiled on the lined pad, a total of about 2,500 cy, was used as backfill in Drum Area A. However, about 200 cy of stockpiled soil on the lined pad was not used as backfill due to the presence of solid debris and pockets of visibly stained soil. This stockpile was characterized and shipped off-site for disposal in April 2001.

Between August 15 and October 7, 2000, drums and semi-intact drums were identified and removed from Drum Area A. Intact drums, semi-intact drums, and spilled drum contents encountered during the excavation were placed in 85-gallon and 110-gallon overpack containers. A total of 160 overpacks from Drum Area A were temporarily stored in the West Warehouse and characterized for disposal. In February and April 2001, these drums were shipped off-site for disposal.

Approximately 48 tons of metal debris, primarily consisting of empty crushed drums and drum parts, were also removed from Drum Area A. Prior to removal from the excavation, the debris was cleaned of soil and residual liquids. The debris was removed from the Property as nonhazardous solid waste in November 2000.

The limits of the excavation were confirmed by performing test pits and a metal detector survey along the bottom and sides of the excavation.

At the completion of excavation, confirmatory samples were collected at a grid spacing of approximately 25 feet along the bottom and sidewalls. A total of 34 confirmatory samples were collected from this area for laboratory testing. All of the samples were tested for SVOCs, VOCs, pesticides, cadmium, chromium, and lead. Selected samples were also tested for corrosivity (pH). The sampling methods and results of the laboratory testing were presented in the initial Status Report (GEI, December 2000).

Based on the analysis of confirmatory samples, contaminant concentrations were reduced to below the established reuse criteria (UCLs). Therefore, the remedial objectives were met in this area.

Between September 29 and October 9, 2000, the excavation was backfilled in three layers, starting from bottom: blast rock from the Detention Pond; excavated soil from Drum Area A that met reuse criteria; and borrow soil from areas adjacent to the excavation.

#### 3.2 Drum Area B

Drum Area B is located at the east central portion of the Property, as shown in Figure 1.

Between August 7 and 10, 2000, Drum Area B was excavated to an average depth of 6 feet bgs. The total excavation volume in this area was approximately 1,150 cy.

Based on visual and PID field screening, excavated soil was segregated and stockpiled. All of the soil stockpiles were tested for SVOCs, VOCs, pesticides, cadmium, chromium, and lead to establish potential suitability for on-Property reuse. The sampling methods and testing results for the stockpiled soil from Drum Area B were presented in Status Report No. 1.

Based on the results of the reuse testing, all of the stockpiled soil from Drum Area B was suitable for reuse. About 650 cy of the stockpiled soil was used as backfill in Drum Area B. The remainder of the soil, about 500 cy, was not structurally suitable for use as backfill due to high organic content (peat). The high organic content soil was stabilized with cement along with the calcium sulfate from the former berm near Drum Area B, and was used as shallow backfill within the Containment Area. The reuse of cement-stabilized soil is discussed in the Part 2 RAM Status Report No. 1.

No intact drums or spilled liquid drum contents were encountered during the excavation. However, between August 7 and 10, 2000, the excavation generated 3 overpack containers of solid waste, primarily pieces of Kempore and resin. The overpacks were stored in the West Warehouse, and characterized for off-site disposal. The testing results for overpack drums from Drum Area B are presented in Appendix D. In February and April 2001, these drums were shipped off-site for disposal.

Approximately 2 tons of metal debris, primarily consisting of empty crushed drums and drum parts, were also removed from Drum Area B. The metal debris was sent for off-site disposal with the debris from Drum Area A in November 2000.

The limits of the excavation were confirmed by over-excavation and by performing test pits along the east sidewall.

At the completion of excavation, confirmatory samples were collected at a grid spacing of approximately 25 feet along the bottom and sidewalls. A total of 16 confirmatory samples were collected from this area for laboratory testing. All of the samples were tested for SVOCs, VOCs, pesticides, cadmium, chromium, and lead. The results of the laboratory testing are summarized in Status Report No. 1. Based on the results of the laboratory testing of the confirmatory soil samples, contaminant concentrations were reduced to below the established reuse criteria (UCL). Therefore, the remedial objectives were met for this area.

The excavation was backfilled in three layers, starting from bottom: excavated soil from Drum Area B that met reuse criteria; excavated soil from Drum Area A that met reuse criteria; and borrow soil from areas adjacent to the excavation.

# 4. Remediation Waste Management

#### 4.1 Drum Area A

Five roll-offs containing 86.5 tons of visibly contaminated soil from Drum Area A were sent for off-site disposal to CWM Chemical Services, L.L.C., in Model City, New York, as non-hazardous solid waste on October 27 and 30, 2000. The material was received at the facility on October 30 and October 31, 2000. Results of disposal testing are presented in Appendix D. Copies of the Non-Hazardous Waste Manifests are presented in Appendix E.

Approximately 200 cubic yards of soil excavated from Drum Area A was judged unsuitable for on-site reuse based on visual evidence of contamination. In April 2001, this soil was sent for off-site disposal to CWM Chemical Services, L.L.C., in Model City, New York, as non-regulated material. The Drum Area A soil was incorporated into the larger scope of soil disposal associated with the Part 2 RAM. Results of disposal testing are presented in Appendix D. Copies of the associated Non-Hazardous Waste Manifests will be reported in the Part 2 RAM Status Report No. 2 in August 2001.

Dewatering effluent generated during excavation and backfilling was treated using a mobile treatment plant and discharged under an NPDES Permit Exclusion issued to Olin in August 2000. Monitoring data associates with the NPDES Permit Exclusion was presented in the Part 2 RAM Status Report No. 1, dated December 27, 2000.

#### 4.2 Drum Area B Soil and Dewatering Effluent

No soil from Drum Area B required off-site disposal.

Dewatering effluent, which primarily consisted of a small volume of storm water, was recharged within the Containment Area just west of the Drum Area B excavation.

#### 4.3 Overpacks

One hundred sixty-three (163) drum overpacks containing intact drums, semi-intact drums, spilled drum contents, and solid waste from Drum Areas A and B were stored at the Property in the West Warehouse. From August through October 2001, personnel from Sevenson Environmental Services, Inc. (Sevenson) collected samples from 160 drums for disposal characterization. Results of disposal testing are presented in Appendix D.

On February 1, 2001, 29 drums containing hazardous waste were shipped off-site for disposal at CWM Chemical Services, L.L.C., in Model City, New York. The drums were received at the facility on February 2, 2001. Copies of the Hazardous Waste Manifests are presented in Appendix E.

On April 20, 2001, 134 drums of non-hazardous material were shipped off-site for disposal at Chemical Waste Management, Inc. of Emelle, Alabama. The drums were received at the facility on April 23, 2001. Copies of the Non-Hazardous Waste Manifests are presented in Appendix E.

#### 4.4 Metal Debris

On November 2 and 6, 2000, approximately 54 tons of metal debris from the Drum Areas and other remedial activities at the Property performed as part of the Part 2 Ram were shipped off-site for disposal at CWM Chemical Services, L.L.C., in Model City, New York. The shipments were received at the disposal facility on November 3 and 7, 2000. Copies of the Non-Hazardous Waste Manifests are presented in Appendix E.

# 5. Other Monitoring Activities

#### 5.1 Meteorological Data

Meteorological data was collected daily during construction, as required by the RAM Plan. The meteorological data for the period of active excavation and drum handling (August 2 through October 9, 2000) is presented in Table 1.

#### 5.2. Air Quality Monitoring

Air quality monitoring was generally performed whenever excavation and /or drum removal was conducted. These activities were performed between August 7 and October 9, 2000.

Real-time Work Zone air monitoring was performed by Sevenson for carbon monoxide, VOCs, hydrogen-sulfide, and lower explosion limit using a multi-gas meter with PID, and for airborne dust using a Sibata real-time dust monitor. Based on field monitoring and prudence, Level B or C personnel protection levels were implemented in the Work Zone during active excavation and drum removal. Real-time monitoring data provided by Sevenson is presented in Appendix F.

As a verification of the real time monitoring conducted during the drum removal activities, time weighted average (TWA) air monitoring for dust and VOCs (generally 8 to 10 hours sampling time) was performed on 11 days and 16 days, respectively. Two types of locations were established for TWA air monitoring at the Property: *Work Zone* monitoring locations, which were within the active excavation and/or along the excavation limits, and *Perimeter* locations which were at distances greater than 250 feet from the edge of the excavation area, and are located on the Olin Property. Air monitoring locations are shown on Figure 1. TWA air monitoring data are presented in Appendix F.

#### 5.2.1 Data Review

Time Weighted air monitoring data provided to GEI by Sevenson was reviewed by GEI for completeness and quality control. A total of 69 six-liter SUMMA canisters were analyzed for volatile organic compounds by EPA GC/MS method TO-15 by Research Triangle Parks Labs of Raleigh, North Carolina. In addition, to the TO-15 reporting list of 41 compounds, a library search was conducted for tentatively-identified compounds (TICs).

A review of the available quality control information for the TO-15 data found that both surrogate and internal standard recoveries were within acceptable control limits for all samples. The lab noted that an NIST-certified gas standard of all target analytes at 1 ppm

was used for calibration. No method blank information was provided for review in the data packages provided by Sevenson. The data is considered acceptable for its intended purpose of health and safety monitoring and documenting volatile concentrations in ambient air around the site during the RAM.

A completeness review was also conducted on the total particulate and total chromium data. A total of 49 air filter samples were analyzed for total particulate analysis by NIOSH method 0500 by Philip Analytical Services (Philip) of Reading, Pennsylvania. Fifty air filter samples were also analyzed by Philip for total chromium by NIOSH method 7600M. The total volume of each air sample was provided on the chain-of-custody.

Total chromium method blank information provided by the lab indicated that up to 0.0006 mg/m³ of total chromium was found in all of the method blanks associated with this project. Using standard EPA validation guidance, all samples with concentrations within five times this amount (0.003 mg/m³) were flagged "B" as estimated and potential false positives. This resulted in all sample results being flagged "B" as estimated and potential false positives due to blank contamination. No calibration data for total particulates or chromium was provided for review. Data is considered useable for comparison to applicable benchmarks for total chromium (above 0.003 mg/m³).

#### 5.2.2 Airborne Dust Monitoring

The maximum TWA Fugitive Dust concentration (National Institute for Occupational Safety and Health [NIOSH] method 0500) measured at Work Zone locations was 0.54 mg/m³. Chromium concentrations for the TWA Work Zone dust samples (NIOSH method 7300M) ranged from 0.00055 to 0.0013 mg/m³. The NIOSH Recommended Exposure Limit (REL) TWA for chromium is 0.5 mg/m³. The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) TWA is 1 mg/m³. The maximum concentration of chromium detected in TWA airborne dust in the Work Zone (0.0013 mg/m³) is slightly below the Massachusetts Threshold Effects Exposure Limit (24-hour average) for chromium (0.00136 mg/m³). Note the data collected during the RAM is only suitable for comparison for applicable standards that are greater than 0.003 mg/m³. Nevertheless, real time monitoring for total and chromium dust establishes that dust levels in the work zone were very low. Work Zone TWA dust monitoring data is summarized in Table 2. The laboratory results for TWA dust monitoring are presented in Appendix F.

TWA dust monitoring was not conducted at the Perimeter locations, since numerous other activities that could contribute to the generation of dust were occurring at the Property during the Drum Removal and adjacent to the sampling locations. However, whenever visible evidence of dust was observed, dust suppression measures were implemented.

### 6. Deviations from RAM Plan and Other Approvals

It is my opinion that the activities associated with the excavation and removal of buried drums and debris at the Property, as described herein were performed in accordance with the RAM plan and the conditions of approval established by MADEP with the following exceptions noted:

- Excavated soil with moderate levels of contamination based on field screening was stockpiled on a lined, bermed pad located east of the warehouses, instead of on two sheets of plastic as proposed in the RAM. The pad was used because it was a more secure storage system than plastic sheets.
- Plastic sheets were not placed below excavated soil stockpiles with low levels of contamination because these stockpiles were located within the Containment Area and plastic covers alone were sufficient to minimize potential contaminant leaching.
- Dewatering effluent from Drum Area A was treated using a mobile treatment plant instead of the Plant B treatment system. This change was made because the mobile treatment plant, which was initial setup to treat dewatering effluent from the concurrent ditch excavations, was more convenient to use than the Plant B treatment system.
- Dewatering effluent from Drum Area B was recharged adjacent to the excavation within the Containment Area. This was done because the volume of water was small and consisted primarily of storm water.
- Arsenic was eliminated from the confirmatory testing suite because the inclusion of arsenic as a site-related COC in the RAM Plan was on error. The parameters reactivity, ignitability, and pH were also eliminated based on field observations.

It is my opinion that these deviations are not significant, and have not affected the integrity of the RAM activities.

# 7. RAM Completion Statement

The objective of this RAM is the excavation and removal of buried drums, debris, and associated impacted soil from two areas (Drum Areas A and B) at the Property. The removal of the drums and debris, and associated contaminated soil was required to eliminate a potential substantial hazard as defined in the MCP, and to eliminate exceedances of Upper Concentration Limits (UCLs) in soil.

It is my opinion that the activities were performed as part of the Drum Removal RAM, as described herein and in Status Report No. 1 (GEI, 2000), were in substantial accordance with the RAM Plan, the Massachusetts Department of Environmental Protection (MADEP) conditional approval of the RAM Plan, dated February 14, 2000, and the general requirements for RAMs described in the MCP (310 CMR 40.0440).

As a result of the Drum Removal RAM, a potential Substantial Hazard, as defined in the Massachusetts Contingency Plan (310 CMR 40.0000 [MCP]), at the Property has been eliminated. Buried drums and debris known or suspected to be present in the Drum Areas have been excavated and removed for characterization and/or off-site disposal. Confirmatory soil sampling from the excavation base and sidewalls of each area demonstrates that remaining soils exhibit concentrations of site-related contaminants that are well below the Upper Concentration Limits (UCLs), and in most cases below the S-3 soil standards listed in the MCP. Based on these findings, it is my opinion that the remediation goals for the RAM, as described above, have been met.

Finally, it is my opinion that this RAM Status Report and Completion Statement conforms to the general requirements for a RAM Completion Statement set forth in the MCP (310 CMR 40, 0446).

TABLES

Table 1.
Summary of Meteorological Data
Olin Chemical Property
51 Eames Street
Wilmington, Massachusetts

Date	Time	Temperature	Wind Speed <sup>1,2</sup>	Wind	Relative	Barometric	Rainfall <sup>3</sup>
		(F)	(mph)	Direction <sup>1,2</sup>	Humidity	Pressure	(inches)
************				(degrees)	(%)	(inches Hg)	
3/2	1357	74	3	154	71	29.87	0
	1458	75	2	264	26	29.85	0
8/4	741	71	2	324	94	29.7	0.09
	1052	81	. 6	304	52	29.7	0
8/7	710	73	5	234	93	29.63	0
	1253	81	7	254	78 	29.53	0
	1629	90	11	304	51	29.5	0
3/8	730	79	4	304	85	29.55	0
	1633	89	7	294	37	29.5	0
3/9	730	75	5	194	84	29.58	0
	1155	84	6	204	55 	29.55	0
	1647	88	3	214	55	29.47	0
3/10	713	70	0	NA	95	29.5	0.06
	1621	90	8	304	32	29.5	0
8/11	924	82	5	54	59	29.65	0
	1550	82	10	94	42	29.64	0
8/14	645	63	5	4	98	29.72	0.18
8/15	711	66	5	344	98	29.75	0.07
	1246	72	5	44	79 	29.77	0
	1649	75	2	354	75	29.75	0
3/16	725	67	4	174	97	29.62	0.01
	1332	73	6	204	89	29.5	0.53
	1535	83	4	254	59	29.45	0
8/17	655	62	6	274	83	29.65	0.01
	1054	76	5	264	44	29.65	0
	1656	76	8	284	36	29.65	0
8/18	829	67	0	NA	77	29.7	0
8/19	1021	74	2	334	63	29.7	0.08
8/21	719	58	3	284	80	30	0
	1650	80	6	304	30	30	00
8/22	706	59	2	304	88	30.05	0
	1312	81	4	204	22	30	0
	1755	78	4	204	41	30	0
8/23	732	62	5	164	93	30	0
	1159	77	8	184	51	29.9	0
	1717	70	9	194	63	29.82	0
8/24	721	63	0	NA	85	29.8	0.09
	1206	87	6	344	47	29.75	0
8/25	726	67	4	334	69	29.9	0
	1309	91	6	314	15	29.76	0
	1747	77	7	154	44	29.75	0
8/26	712	64	1_	NA	86	29.7	0
	1202	85	5	174	28	29.7	0
	1728	80	4	94	44	29.6	0

Table 1.
Summary of Meteorological Data
Olin Chemical Property
51 Eames Street
Wilmington, Massachusetts

Date	Time	Temperature	Wind Speed <sup>1,2</sup>	Wind	Relative	Barometric	Rainfall <sup>3</sup>
		(F)	(mph)	Direction <sup>1,2</sup> (degrees)	Humidity (%)	Pressure (inches Hg)	(inches)
8/28	915	70	2.9	110	NM	NM	0
8/29	1245	78	6	154	NM	NM	0
8/30	1630	82	4	164	NM	NM	0
8/31	1140	89	5	234	NM	. NM	0
	1341	91	5	254	NM	NM	0
	1510	90	6	214	NM	NM	0
9/1	750	NM	7.7	204	NM	NM	0
9/5	1130	73	5	344	25	30.02	0.56
· ·	1716	71	7	344	24	30.05	0
9/6	710	52	4 .	324	80	30.25	0
	1240	75	6	344	28	30.25	0
	1612	66	10	144	34	30.2	0
9/7	725	52	0	NA	86	30.15	0
- • •	1710	77	2	194	32	29.96	0
9/8	1230	80	7.5	240	NM	NM	0
9/9	1000	78	2	294	NM	NM	0
9/11	821	62	0	NA	96	29.95	0
<b>.</b>	1335	82	4	124	39	29.85	0
	1717	75	6	114	61	29.85	0
9/12	711	64	9	184	93	29.82	0
	1432	82	7	184	48	29.65	0
9/13	757	69	2	214	97	29.55	0.23
	1802	76	3	274	41	29.65	0.01
9/14	1019	75	6	184	40	29.7	0
<del>-</del>	1247	80	3	144	28	29.7	0
	1219	71	4	124	37	29.2	0
9/15	713	63	4	134	98	29.45	0.23
•. , -	1142	67	6	154	98	29.26	1
9/16	714	55	3	274	91	29.45	0.24
9/18	718	59	3	294	78	29.7	0.01
	1800	74	4	214	50	29.72	0
9/19	858	NM	3	184	80	29.75	0
	1613	76	9	194	59	29.67	0
9/20	720	67	7	334	98	29.45	0.6
	1203	80	7	324	NM	NM	0
	1740	79	5	194	67	29.45	0
9/21	727	68	7	194	91	29.35	0.02
	1710	75	4	294	40	29.45	0
9/22	800	59	3	254	68	29.8	0
	1559	75	2	284	31	29.8	0
9/23	740	57	0	NA	NM	NM	0
9/25	1730	57	4	134	59	29.7	0
9/26	907	57	4	354	77	29.75	0
	1755	56	8	354	95	29.7	0.2
9/27	740	51	3	314	95	29.75	0.1
~ I #m *	1830	61	0	NA	NM	NM '	0

Table 1.
Summary of Meteorological Data
Olin Chemical Property
51 Eames Street
Wilmington, Massachusetts

Date	Time	Temperature (F)	Wind Speed <sup>1,2</sup> (mph)	Wind Direction <sup>1,2</sup> (degrees)	Relative Humidity (%)	Barometric Pressure (inches Hg)	Rainfall <sup>3</sup> (inches)
9/28	808	56	4	344	- 88	29.75	0
	1707	66	5	354	36	29.95	0
9/29	750	50	4	324	69	30.15	0
	1637	56	7	134	37	30.15	0
9/30	821	49	4	174	73	30.12	0
10/2	730	52	1	NA	98	29.78	0
	1625	64	2	54	72	29.65	0
10/3	819	56	2	104	87	29.55	0
	1707	76	9	284	43	29.45	0
10/4	1816	65	6	324	85	29.6	0
10/5	807	58	5	344	82	29.8	0.02
	1557	57	1	NA	89	29.8	0.01
10/6	1030	55	NM	NM	NM	NM	0.6
10/7	1205	70	5	344	33	29.7	0
10/9	1700	48	5	334	60	29.8	0

F = Degrees Fahrenheit.

mph = Miles per hour.

Hg = Mercury.

NA = Wind direction could not be accurately determined for wind speeds less than 2 mph.

NM = Not measured.

#### Footnotes:

- 1. Wind direction relative to true north.
- 2. Wind speed and wind direction for 8/28, 9/1, and 9/8 based on data obtained from Bedford Hanscom Field, Bedford, Massachusetts.
- 3. Cumulative rainfall since previous measurement.

Table 2.
Summary of Dust Monitoring Results
Olin Chemical Property
51 Eames Street
Wilmington, Massachusetts

Sample Date	Sample ID	Lab ID	Map ID	Particulate, total [NIOSH 0500]	Chromium, total [NIOSH 7300M]	
				(mg/m³)	(mg/m³)	
8/9/00	Area B, Downwind	1415404	1-E	<0.096	0.00067	В
	Area B. North Perimeter	1415405	1-N	0.196	0.00065	В
	Area B, South Perimeter	1415402	1-S	<0.095	0.00066	В
	Area B, Workzone	1415403	1-WZ	<0.095	0.00067	В
8/10/00	Area B, Downwind	1415410	1-E	<0.11	0.0009	В
	Area B, North Perimeter	1415407	1-N	<0.11	0.0007	В
	Area B, South Perimeter	1415409	1-S	<0.1	0.0007	В
	Area B, Upwind	1415408	1-W	<0.11	0.0008	В
	Area B, Workzone	1415406	1-WZ	<0.17	0.0012	В
8/15/00	Area A, Downwind	1416259	2-8	<0.097	0.00068	В
0, 10.00	Area A, East Perimeter	1416255	2-E	<0.094	0.00066	В
	Area A, Upwind	1416258	2-N	<0.095	0.00057	В
	Area A, West Perimeter	1416256	2-W	<0.15	0.0011	₿
	Area A, Workzone	1416257	2-WZ	NR	0.00063	В
8/17/00	Area A, Downwind	1416261	2-N	<0.18	0.0013	В
G/ 11700	Area A, Upwind	1416262	2-S	<0.16	0.0011	В
	Area A, East Perimeter	1416263	2-E	<0.15	0.0009	В
	Area A, Workzone	1416260	2-WZ	<0.16	0.001	В
	Area A. West Perimeter	1416264	2-W	<0.15	0.0011	В
8/25/00	Area A, Downwind	1417679	2-N	0.15	0.0008	В
0/25/00	Area A, East Perimeter	1417681	2-E	<0.11	0.0008	В
	Area A, Upwind	1417680	2-N	<0.19	0.0013	В
	Area A, West Perimeter	1417678	2-W	<0.15	0.001	В
	Area A, Workzone	1417677	2-WZ	0.47	0.0008	В
8/26/00	Area A, Workzone Area A, Downwind	1417682	2-W	0.2	0.0007	В
0/20/00	Area A, North Perimeter	1417684	2-N	<0.1	0.0007	В
	Area A, South Perimeter	1417685	2-S	0.16	0.0009	В
	Area A, Upwind	1417683	2-E	0.2	0.0012	В
8/29/00	Area A, East Perimeter	1418300	2-E	0.103	0.00066	В
0/23/00	Area A, North Perimeter	1418302	2-N	0.118	0.00055	В
	Area A, South Perimeter	1418304	2-S	0.54	0.0009	В
	Area A, West Perimeter	1418301	2-W	0.166	0.00064	В
	Area A, Workzone	1418303	2-WZ	<0.15	0.001	В
8/30/00	Area A, East Perimeter	1418306	2-E	<0.089	0.00062	В
0/00/00	Area A, North Perimeter	1418307	2-N	0.087	0.00061	В
	Area A, South Perimeter	1418309	2-S	<0.11	0.0007	В
	Area A, West Perimeter	1418305	2-W	<0.09	0.00063	В
	Area A, Workzone	1418308	2-WZ	0.5	0.0011	В
9/6/00	Area A. East Perimeter	1419175	2-E	0.3	0.0012	В
3/0/00	Area A, North Perimeter	1419174	2-N	0.189	0.00072	₿
	Area A. South Perimeter	1419176	2-S	<0.12	0.0009	В
	Area A, West Perimeter	1419177	2-W	<0.095	0.00076	В
9/7/00	Area A, West Ferimeter Area A, East Perimeter	1419181	2-E	0.182	0.00077	В
arridu	Area A, East Fermieter Area A, North Perimeter	1419178	2-N	<0.096	0.00067	В
	Area A, North Perimeter	1419178	2-N 2-S	<0.092	0.00073	В
	Area A, West Perimeter	1419180	2-W	0.101	0.00064	8
9/14/00	Area A, West Perimeter  Area A, East Perimeter	1420187	2-vv 2-E	<0.156	0.00094	В
J/ 17/00	Area A, East Perimeter Area A, North Perimeter	1420185	2-L 2-N	0.327	0.00056	В
	Area A, North Perimeter Area A, South Perimeter	1420188	2-N 2-S	<0.0874	0.00061	В
	Area A, West Perimeter	1420186	2-W	<0.112	0.00079	В

- 1. NIOSH = National Institute for Occupational Safety and Health.
- 2. NR = Unable to report result, filter and backpad reversed in cassette.
- 3. mg/m³ = milligrams per cubic meter.

#### **Qualifying Note:**

B = The reported result is attributed to laboratory contamination due to the presence of the chemical in the associated blank.

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Table 3.

Summary of Individual VOCs detected in Work Zone Samples
Olin Chemical Property
51 Eames Street
Wilmington, Massachusetts

VOC Parameter	Work Zon	e Samples	Applicable Standards		
	Minimum	Maximum	NIOSH REL TWA	OSHA PEL	
	Detected,	Detected,	(ppm)	TWA (ppm)	
	TWA (ppm)	TWA (ppm)			
1,1,2,2-Tetrachloroethane	0.0014	0.0019	1 .	5	
1,1,2-Trichloroethane	0.0009	0.0074	10	10 .	
1,2,4-Trichlorobenzene	0.0013	0.0038	5	NS	
1,2,4-Trimethylbenzene	0.0013	0.0024	25	NS	
1,2-Dichlorobenzene	0.001	0.001	50	50	
1,3,5-Trimethylbenzene	0.0023	0.0033	25	NS	
1,3-Butadiene	0.0024	0.0024	NS	1	
1,4-Dichlorobenzene	0.0014	0.0014	. NS	75	
Benzene	0.0012	0.0138	0.1	1	
Benzyl chloride	0.001	0.0115	1 (ST, 15-minute)	1	
Chlorobenzene	0.0017	0.0017	NS	75	
Chloroethane	0.001	0.001	NS	1000	
Chloroform	0.002	0.0037	2 (ST, 60-minute)	50	
Chloromethane	0.0101	0.0101	NS	100	
cis-1,3-dichloropropene	0.0027	0.0027	1	NS	
Ethyl benzene	0.001	0.0051	100	100	
Hexachlorobutadiene	0.0016	0.0035	0.02	NS	
m,p-Xylene	0.0013	0.0069	NS	NS	
Methyl t-butyl ether (MTBE)	0.0021	0.0073	NS	40	
Methylene Chloride	0.0012	0.0424	NS	25	
o-Xylene	0.0012	0.0026	100	100	
Styrene	0.0022	0.007	50	100	
Tetrachloroethene	0.0014	0.0208	NS	100	
Toluene	0.001	0.1906	100	200	
trans-1,3-dichloropropene	0.0012	0.0052	1	NS	
Trichloroethene	0.0015	0.0077	NS	100	
Trichlorofluoromethane (11)	0.001	0.0034	1000	1000	

- 1. VOC = Volatile Organic Compound
- 2. TWA = Time Weighted Average
- 3. NIOSH = National Institute of Occupational Safety and Health
- 4. REL = Recommended Exposure Limit
- 5. OSHA = Occupational Safety and Health Administration
- 6. PEL = Permissible Exposure Limit
- 7. NS = No standard
- 8. ST = Short-term exposure
- 9. VOCs by method TO-15 (does not include tentatively identified compounds [TICs]).

Table 4.

Summary of Total VOC Results
Olin Chemical Property
51 Eames Street
Wilmington, Massachusetts

Date	Intrusive Construction Activity	Wind	Total VOC Concentration (ppbv) <sup>4</sup>				
		Direction	Work	Zone <sup>2</sup>	Perimeter	Perimeter	Perimeter
			(min)	(max)	Upwind <sup>3</sup>	Downwind <sup>3</sup>	Average <sup>3</sup>
8/2/00	None (Pre-excavation)	SE, W	3.6	7.5			7
8/7/00	Drum Area B excavation	SW, W, NW	2.1	10.7			1.5
8/8/00	Drum Area B excavation	NW	25.6	25.6	1 ·	NS	1
8/9/00	Drum Area B excavation	S, SW	3.1	14.3	· · · · · · · · · · · · · · · · · · ·		NS
8/15/00	Drum Area A excavation, drum removal	N, NE, N	22	52.4	17.8	30.2	24
8/17/00	Drum Area A excavation, drum removal	W	14.8	34.6			84.5
8/25/00	Drum Area A excavation, drum removal	NW, SE	24.7	65.8		នេះ ក៏ ស្វែ	14.8
8/26/00	Drum Area A excavation, drum removal	S, E	171.5	259.5			79.3
8/28/00	Drum Area A excavation, drum removal	E <sup>1</sup>	80.7	84			125.95
8/29/00	Drum Area A excavation, drum removal	SE	11	11			NS
8/30/00	Drum Area A excavation, drum removal	S	19.7	38.8	14	54	34
9/7/00	Drum Area A excavation, drum removal	S	2.2	19.6	4.7	8.2	6.45
9/8/00	Drum Area A excavation, drum removal	SW <sup>1</sup>	1.9	12.9		****	9.1
9/11/00	Drum Area A excavation, drum removal	SE	1.7	7.3	4.2	17	10.6
9/13/00	Drum Area A excavation (Area B backfill complete)	SW, W	2	2			6.25
9/18/00	Buried Debris Area excavation	NW, SW	6.2	23.4			4.5

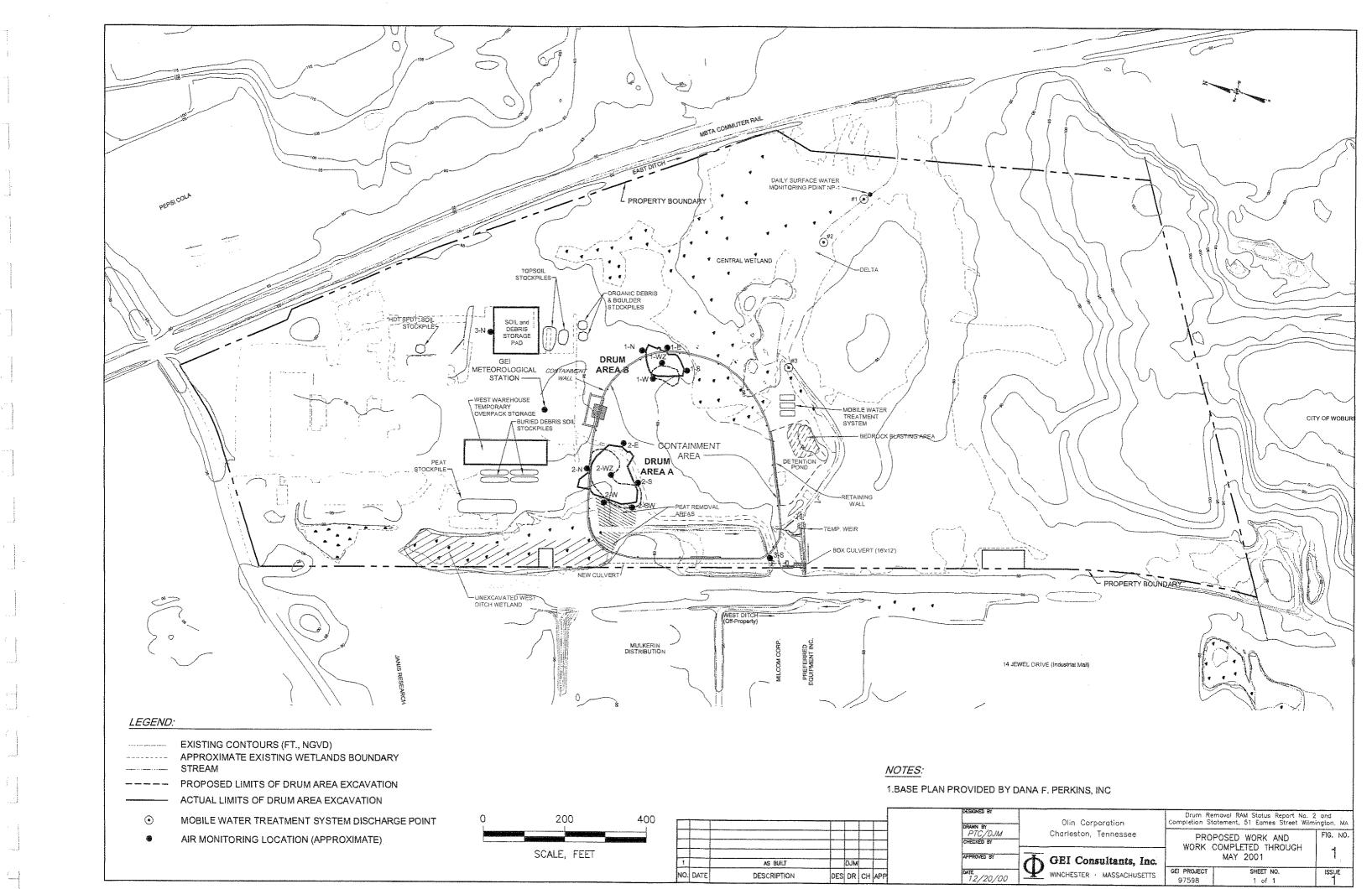
- 1. VOC = Volatile Organic Compound.
- 2. Wind direction corresponds to compass quadrants (e.g., SE = southeast).
- 3 ppbv = parts per billion by volume.
- 4. NS = No sample collected.

#### Footnotes:

- 1. Wind directions for 8/28/00 and 9/8/00 are based on data obtained from Bedford Hanscom Field, Bedford, Massachusetts.
- 2. Work Zone sample results consist of several samples collected within the Work Zone and along the excavation perimeter.
- 3. Perimeter samples were not identified as upwind or downwind on days where wind direction deviated by more than 45 degrees from north or south. The two perimeter sample locations are identified on Figure 1 as "3-N" and "3-S".
- 4. Total VOCs by method TO-15 (does not include tentatively identified compounds [TICs]).

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**FIGURES** 



# Appendix A

**MADEP RAM Status Report Transmittal Form** 



#### Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

**BWSC-106** 

# RELEASE & UTILITY-RELATED ABATEMENT MEASURE (RAM & URAM) TRANSMITTAL FORM

Release	Tracking	Number
---------	----------	--------

0471

Pursuant to 310 CMR 40.0444 - 0446 and 310 CMR 40.0462 - 0465 (Subpart D)

A. SITE LOCATION: Site Name: Olin Wilmington	
Street: 51 Eames Street	Location Aid:
Wilmington MA	ZIP Code: 01887
City/ I OWII.	
Check here if a Tier Classification Submittal has been provided to DEP for this Re	elease Tracking Number.
Related Release Tracking Numbers That This RAM or URAM Addresses:	
B. THIS FORM IS BEING USED TO: (check all that apply)	
Submit a RAM Plan (complete Sections A, B, C, D, E, F, J, K, L and M).	round written DAM Dien
Check here if this RAM Plan is an update or modification of a previously app	
Submit a RAM Status Report (complete Sections A, B, C, E, J, K, L and M).	
Submit a RAM Completion Statement (complete Sections A, B, C, D, E, G, J, k	
Confirm or Provide <b>URAM Notification</b> (complete Sections A, B, H, K, L and M).	
Submit a <b>URAM Status Report</b> (complete Sections A, B, C, E, J, K, L and M).	
Submit a URAM Completion Statement (complete Sections A, B, C, D, E, I, J, I	
You must attach all supporting documentation required for ea any Legal Notices and Notices to Public Officia	
C. SITE CONDITIONS:	
Check here if the source of the Release or Threat of Release is known.	
If yes, check all sources that apply: UST Pipe/Hose/Line	AST 🗹 Drums 🔲 Transformer 📗 Boat
Tanker Truck Vehicle Other Specify:	
Identify Media and Receptors Affected: (check all that apply) Air 🗾 Air 🚺 Grou	indwater Surface Water Sediments 🗾 Soil
✓ Wetlands	I Public Water Supply Zone 2 Residence
School Unknown Other Specify:	
Identify Release and/or Threat of Release Conditions at Site: (check all that apply)	
2 and 72 Hour Reporting Condition(s) 120 Day Reporting Co	ndition(s) Other Condition(s)
Describe: IRA Completion Statement for Drum Area	submitted to MADEP in June 1996.
RAMs may be conducted concurrently with an IRA o URAMs may not be conducted if any 2 or 72 Hour	
Identify Oils and Hazardous Materials Released: (check all that apply)	Chlorinated Solvents Heavy Metals
Others Specify:	
D. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply)	
Assessment and/or Monitoring Only	Deployment of Absorbant or Containment Materials
Excavation of Contaminated Soils	Temporary Covers or Caps
Re-use, Recycling or Treatment	Bioremediation
On Site Off Site Est. Vol.: cubic yar	ds Soil Vapor Extraction
Describe:	Structure Venting System
Store On Site Off Site Est. Vol.:cubic yar	ds Product or NAPL Recovery
SECTION D IS CONTINUED ON T	THE NEXT PAGE.



#### Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

**BWSC-106** 

RELEASE & UTILITY-RELATED ABATEMENT MEASURE (RAM & URAM) TRANSMITTAL FORM

Release Tracking Number

0471

A STATE OF THE PARTY OF THE PAR	Pursuant to 310 CMR 40.0444 - 0446 and 310 CMR 40.0462	! - 0465 (Subpart D)			
D. DE	SCRIPTION OF RESPONSE ACTIONS (continued):				
	Landfill Cover Disposal Est. Vol.: cubic yards	Groundwater Treatment Systems			
<b>∠</b> Re	emoval of Drums, Tanks or Containers	Air Sparging			
Đ	escribe: See attached RAM Status Report No. 2.	Temporary Water Supplies			
Re	emoval of Other Contaminated Media	Temporary Evacuation or Relocation of Residents			
Sp	pecify Type and Volume:	Fencing and Sign Posting			
Ot	ther Response Actions Describe:				
	See 310 CMR 40.0442 for limitations on the scope See 310 CMR 40.0464 for performance standa				
	neck here if this RAM or URAM involves the use of Innovative Technologies. DEP is int				
	novative Technologies Clearinghouse. escribe Technologies:				
	ANSPORT OF REMEDIATION WASTE: (if Remediation Waste has been sen	ut to an off-site facility, answer the following questions)			
	of Facility: Various. See attached RAM Status Report 1				
	nd State:				
	ty of Remediation Waste Transported to Date:				
	M PLAN:				
	neck here if this RAM Plan received previous oral approval from DEP as a continuation	of a Limited Removal Action (LRA).			
	ate of Oral Approval:				
☐ If a	a RAM Compliance Fee is required, check here to certify that the fee has been submitted as 310 CMR 40.0444(2) to learn when a fee is not required.	ed. You <b>MU</b> ST attach a photocopy of the payment.			
Ch Ch	neck here if the RAM Plan is proposed for a Transition Site. If this is the case, you may need the RAM, if not previously provided. See 310 CMR 40.0600 for further inform	y need to attach an LSP Evaluation Opinion prior to mation about Transition Sites.			
	M COMPLETION STATEMENT:				
sul	a RAM Compliance Fee is required in connection with submission of the RAM Complet ibmitted. You <b>MUS</b> T attach a photocopy of the payment. You owe this fee when submi iproval of a RAM that continued an LRA, and have NOT previously submitted a RAM Pl	tting a RAM Completion Statement If you received oral			
If ar State	ny Remediation Waste will be stored, treated, managed, recycled or reused at the ment, you must submit a Phase IV Remedy Implementation Plan, along with the RAM Completion Statement.	ne site following submission of the RAM Completion appropriate transmittal form, as an attachment to the			
H. UR.	AM NOTIFICATION:				
Identify	Location Type: (check all that apply) Public Right of Way Util	lity Easement Private Property			
Identify	Utility Type: (check all that apply)  Sanitary/Combined Sewerage	Water Drainage Natural Gas			
	Telephone Steam Lines Telecommunications Electric	Other Specify:			
Ch	neck here if you provided DEP with previous oral notification of this URAM. Date of	Oral Notice:			
	neck here if the property owner was NOT contacted prior to initiation of the URAM. If the was not contacted, including the date and time when contact ultimately occurred.	his is the case, you must attach an explanation of why the			
en لـــا	Check here if this URAM will occur in connection with the construction of new public utilities. If this is the case, document the nature and extent of encountered contamination, the scope and expense of necessary mitigation and the benefits amd limitations of project alternatives.				
	e exception stated below, the person undertaking the URAM must provide the name ar ction with the URAM:	nd license number of an LSP engaged or employed in			
LS	SP Name; LSP Li	cense Number:			
	ormation is not required if the URAM is limited to the excavation and/or handling of not i				



# Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

**BWSC-106** 

#### **RELEASE & UTILITY-RELATED ABATEMENT** MEASURE (RAM & URAM) TRANSMITTAL FORM

Release Tracking Number

3 -	0471

Pursuant to 310 CMR 40.0444 - 0446 and 310 CMR	40.0462 - 0465 (Subpart D)
. URAM COMPLETION STATEMENT:	
Check here if this URAM was limited to the excavation and/or handling of not m than 20 cubic yards of soil contaminated by either a Hazardous Material or a mi	ore than 100 cubic yards of soil contaminated by Oil, or not more xture of a Hazardous Material and Oil.
If any Remediation Waste will be stored, treated, managed, recycled or reu Statement, you must submit either a Release Abatement Measure (RAM) P appropriate transmittal form, as an attachment t	lan or a Phase IV Remedy Implementation Plan, along with the
J. LSP OPINION:	
I attest under the pains and penalties of perjury that I have personally examined and documents accompanying this submittal. In my professional opinion and judgment by 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and (iii) the provisinformation and belief,	pased upon application of (i) the standard of care in 309 CMR
if Section B of this form indicates that a Release Abatement Measure Plan is be submittal (i) has (have) been developed in accordance with the applicable provisions reasonable to accomplish the purposes of such response action(s) as set forth in the complies(y) with the identified provisions of all orders, permits, and approvals identified.	of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and eapplicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii)
if Section B of this form indicates that a Release Abatement Measure Status R being submitted, the response action(s) that is (are) the subject of this submittal (i) is M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accapplicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) complies(y) win this submittal;	s (are) being implemented in accordance with the applicable provisions of omplish the purposes of such response action(s) as set forth in the
> if Section B of this form indicates that a Release Abatement Measure Complet Statement is being submitted, the response action(s) that is (are) the subject of this with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) as action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40, permits, and approvals identified in this submittal;	s submittal (i) has (have) been developed and implemented in accordance ppropriate and reasonable to accomplish the purposes of such response
I am aware that significant penalties may result, including, but not limited to, possible false, inaccurate or materially incomplete.	e fines and imprisonment, if I submit information which I know to be
Check here if the Response Action(s) on which this opinion is based, if any, are DEP or EPA. If the box is checked, you MUST attach a statement identifying the	e (were) subject to any order(s), permit(s) and/or approval(s) issued by
LSP Name: M. Margret Hanley LSP #: 8494	
Telephone: 781.721.4022 Ext.:	
FAX: (optional)	
Signature: Mulayret Henley	
Signature: Mayet Henley Date: July 12, 2001	
An LSP Opinion is not required for a Utility-Rela	ted Abatement Measure Notification.
An LSP Opinion is not required for a URAM Completion Statement if the UR 100 cubic yards of soil contaminated by Oil, or not more than 20 cubic a mixture of Hazardous M	AM is limited to the excavation and/or handling of not more than yards of soil contaminated either by Hazardous Material or
K. PERSON UNDERTAKING RAM OR URAM:	
Name of Organization: Olin Corporation	Title: Principal Environmental Specialist
Name of Contact: Steve Morrow, P.E.	Title:
Street: 1186 Lower River Road, P.O. Box 248	37310-0248
City/Town: Charleston	
Telephone: 423.336.4511 Ext.:	FAX:
Check here if there has been a change in person undertaking the RAM or URA	sM.



# Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC-106

RELEASE & UTILITY-RELATED ABATEMENT
MEASURE (RAM & URAM) TRANSMITTAL FORM

0471

Pursuant to 310 CMR 40.0444 - 0446 and 310 CMR 40.0462 - 0465 (Subpart D) RELATIONSHIP TO SITE OF PERSON UNDERTAKING RAM or URAM: (check one) 🕅 RP or PRP Specify: 🔏 Owner 🔘 Operator 🔘 Generator 🔘 Transporter Other RP or PRP: \_\_ Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2) Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j)) Any Other Person Undertaking RAM or URAM Specify Relationship: M. CERTIFICATION OF PERSON UNDERTAKING RAM OR URAM: STEUE MOXROW , attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to. possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information. Title: PRINCIPLE ENU, SPECMUIST (signature) Date: <u>July 12, 200</u>1 (print name of person or entity recorded in Section K) Enter address of person providing certification, if different from address recorded in Section K: \_\_\_\_\_\_ State: \_\_\_\_ City/Town: \_\_ \_\_\_\_ Ext.: \_\_\_\_\_ FAX: (optional) \_\_ Telephone: YOU MUST COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS

# Appendix B

**RAM Approval Letter** 



ARGEO PAUL CELLUCCI Governor

JANE SWIFT
Lieutenant Governor

# COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS DEPARTMENT OF ENVIRONMENTAL PROTECTION Metropolitan Boston – Northeast Regional Office

SITE TEAN

BOB DURAND Secretary

LAUREN LISS
Commissioner

FEB 1 4 2000

Olin Corporation P.O. Box 248 1186 Lower River Road, NW Charleston, TN 37310 ATTN: Stephen Morrow RE: Wilmington
Olin Chemical
51 Eames Street
RTN 3-0471
Conditional Approval:
Excavation of Buried Drums

Dear Mr. Morrow:

On January 24, 2000 the Department of Environmental Protection (DEP) received a Release Abatement Measure (RAM) Plan that proposed a remedial action at the above referenced site. The Release Abatement Measure Plan was prepared on behalf of the Olin Corporation by Law Engineering and Environmental Services, Inc., and reviewed by Margret Hanley of Greenfield International, the Licensed Site Professional for the site. The RAM Plan was submitted to DEP's Bureau of Waste Site Cleanup (BWSC) in accordance with 310 CMR 40.0440 of the Massachusetts Contingency Plan (MCP).

Release Abatement Measures are a class of remedial actions that are voluntarily undertaken at locations where a release of oil and/or hazardous material has occurred (disposal sites). Such response actions are intended to reduce risks at the disposal site, and/or to increase the cost effectiveness of future response actions which may be necessary at the disposal site, and are subject to approval by DEP/BWSC pursuant to Massachusetts General Law, Chapter 21E (MGL c.21E), and 310 CMR 40.0000.

The purpose of this correspondence is to: (a) inform you that the proposed Release Abatement Measure has been conditionally approved pursuant to 310 CMR 40.0443, and (b) specify the conditions under which this Release Abatement Measure is granted approval.

#### Response Action Approval

The objective of the RAM is to excavate two areas where contaminated soils, drums, and laboratory bottles were previously identified in test pit excavations completed by Conestoga-Rovers & Associates (CRA) in October 1991. The first area was identified in test pits 6, 7, and 8, and is located approximately 150 feet southwest of the warehouses. The second area was identified in test

Wilmington RTN 3-0471 RAM Approval

pit 21, and is located approximately 350 feet southeast of the warehouses. Olin will attempt to excavate buried drums, bottles, and all soils contaminated above Upper Concentration Limits (UCLs), and "eliminate any substantial hazard" associated with these areas of the site. The soil will be characterized for the presence of hazardous materials and if necessary disposed of off site. The contents of drums and laboratory bottles will be characterized for the presence of hazardous materials and disposed of off site. Post excavation samples will be collected to evaluate the effectiveness of the RAM. Samples will be analyzed for volatile organic compounds, semivolatile organic compounds, pesticides, arsenic, cadmium, chromium, lead, ignitability, pH, and reactivity. If dewatering of the excavation is required, groundwater will be stored in a temporary tank on site and treated in the existing Plant B treatment system.

DEP's approval of the activities described above is contingent upon your adherence to the following conditions of approval, and to the provisions of all applicable DEP policies governing response actions. Your initiation of the approved activities will constitute your understanding and acceptance of the conditions of this approval.

#### I. Site Specific Conditions

- A) DEP reviewed the Phase II Comprehensive Site Investigation completed by CRA, and three areas were identified where test pit investigations revealed contaminated soil, drums, and laboratory wastes. The proposed RAM presently only addresses two of these areas. DEP strongly recommends that the third area, identified in test pits 18, 19, and 20, and located approximately 100 feet southwest of the warehouses, should also be addressed under this RAM.
- B) The CRA Phase II indicates that the chemical compounds with the trade names Opex and Kempore were identified in soil, drums, and laboratory wastes excavated from test pits in the disposal areas. Samples collected as part of the RAM investigation must also be analyzed for these compounds.
  - C) If the Plant B groundwater treatment system is used to treat groundwater from dewatering operations, the treatment system must be modified appropriately to ensure remediation of the suite of contaminants present in the buried drum areas. Influent samples from the dewatering operations and effluent samples collected after treatment must be tested for the full suite of potential contaminants identified in the RAM plus Opex and Kempore on a daily basis.
- D) Portions of the study area are located within a mapped wetland. Olin must file a Request for a Determination of Applicability or an Order of Conditions, if required, with the Wilmington Conservation Commission.

#### II. General Conditions

A) This response action must be conducted under the direct supervision of a competent professional with specific experience in site remediation/environmental engineering practices, using good engineering procedures and accepted construction practices, and must be managed, supervised, actually performed, or periodically reviewed by a Licensed Site Professional:

- B) This response action must be performed in a manner and to a degree which ensures the protection of human health, safety, public welfare and the environment;
- C) This response action must be conducted in compliance with all applicable public involvement provisions specified in 310 CMR 40.0428;
- D) The subject site shall not be deemed to have had all the necessary and required response actions taken unless and until all substantial hazards presented by the site have been eliminated and a level of No Significant Risk exists or has been achieved in compliance with M.G.L. c. 21E and the MCP. In addition, the MCP requires persons undertaking response actions at disposal sites to perform Immediate Response Actions (IRAs) in response to "sudden releases", Imminent Hazards and Substantial Release Migration. Such persons must continue to evaluate the need for IRAs and notify DEP immediately if such a need exists:
- E) Pursuant to 310 CMR 40.1020, the feasibility of reducing the concentrations of oil and/or hazardous material in the environment to background conditions, or to levels which approach background conditions, must be evaluated before a Class A Response Action Outcome can be achieved at this site.

### III. Required Submittals

Pursuant to the provisions of 310 CMR 40.0440, within 120 days of the date of the RAM Plan, one of the following reports must be received by DEP:

- A) A Release Abatement Measure Completion Statement (DEP Form BWSC-106) and a completion report, as specified in 310 CMR 40.0446, in cases where the proposed response actions have been completed; or
- B) A Release Abatement Measure Status Report, as specified in 310 CMR 40.0445, (accompanied by DEP Form BWSC-106), if the proposed response actions are ongoing; or
- C) A Response Action Outcome Statement (DEP Form BWSC-104), as specified in 310 CMR 40.1000, in cases where the proposed response actions have eliminated significant risk at the site such that no further response actions are necessary.

Reports concerning Release Abatement Measures should be addressed to the attention of Christopher Pyott at DEP, Bureau of Waste Site Cleanup, Site Management Section, 205a Lowell Street, Wilmington, MA 01887.

### Limitations

This letter constitutes conditional authorization from DEP/BWSC to proceed with the response action you have proposed to conduct. Such authorization is required by M.G.L. Chapter 21E, the Massachusetts Contingency Plan (MCP), and other applicable DEP/BWSC policies. However, you should be aware of the following limitations and additional considerations:

Wilmington RTN 3-0471 RAM Approval

- In reviewing the Release Abatement Measure Plan, our primary intent was to ascertain whether the proposal, as presented, appeared to be protective of public health and environmental interests, and consistent with pertinent DEP regulations, policies, and accepted engineering practices. Our approval in this matter does not necessarily mean that we have determined that the proposed response action is optimal, sufficient, or cost-effective. It is incumbent upon the environmental professional directing response operations to fully explain, document, and defend design and operational decisions. All such activities can be audited by DEP in conformance with the provisions of 310 CMR 40.1100;
- This approval is granted by DEP/BWSC under the provisions of M.G.L. Chapter 21E, the MCP, and other applicable DEP/BWSC policies. It is the responsibility of parties conducting response actions to obtain any other necessary federal, state, or local permits or approvals; and
- 3) DEP's decision in this matter was based upon the information contained in the referenced proposal, and any other accompanying/previous submittals, and would be subject to review if these sources contained any material omissions or misstatements.

Your cooperation in this matter is appreciated. If you have any further questions regarding this matter, please contact Christopher Pyott at (978) 661-7739 or at the letterhead address. All future correspondence regarding this location must reference the DEP Release Tracking Number listed in the subject heading.

Very truly yours,

Christopher Pyott

Environmental Analyst

Stephen Johnson

Section Chief

Site Management

cc: Wilmington BOH

Wilmington Water Department

Data entry/file

DEP/NERO/Water Supply, Attn: Jim Persky

Greenfield International, 131 Mount Auburn Street, Cambridge, MA 02138

Attn: Margret Hanley

Law Engineering and Environmental Services, Inc., 112 Town Park Drive, Kennesaw, GA

Attn: Keith Hansen

Geomega, 2995 Baseline Road, Suite 202, Boulder, CO 80303, Attn: Andy Davis

Drum Removal RAM, Status Report No. 2 and Completion Statement Olin Corporation July 12, 2001

# Appendix C

**Permits** 

Drum Removal RAM, Status Report No. 2 and Completion Statement Olin Corporation July 12, 2001

## **ORDER OF CONDITIONS**

344-712 for DEP use only

Massachusetts Department of Environmental Protection Bureau of Resource Protection - Wetlands

X)Groundwater Supply

DElood Control

# WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, Section 40

A Applicant Information		RECEIVED
From: Wilmington Wilmington Conservation Commission	The Notice of Intent for this production 21, 2000	OLIN-ENVIRONMENTAL
DEF File #344-712 Project DEF File Number	The public hearing was closed February 2, 2000	REMEDIATION GROUP
Olin Environmental Management  Applicant Name P.O. Box 248, 1186 Lower River Road  Malling Address	Date  Title and Date of final Plans a	and Other Documents
Charleston, TN 37310 State The project site is located at:	52C attach	
Earnes Street		
Map 37 Parcels 10  Assessors Map/Plat# Parce/Lot #  and the property is recorded at the Registry of Deeds for Middlesex – North LC240 D003  County Book Page  Certificate (if registered land)	TO: JEFF	HNORENC
Findings pursuant to the Massachusetts Wetlands pi	urthermore, the Commission hereby oposed, is: the following boxes)	finds that the project, as
Intent and based on the information provided in this presented at the public hearing, this commission finds that the area in which work is proposed is significant to the area in which work is proposed is significant to the following interests of the Wetlands Protection Act (check all that apply):	the following conditions which are notified to the performance standards set to egulations, to protect those interest commission orders that all the work accordance with the Notice of Intentionlowing General Conditions, and all	forth in the welands checked above. This shall be performed in referenced above, the

Rev. 10/98

XPublic Water Supply XPrivate Water Supply

XS10mm Damage Prevention

□Land Containing Shellfish

Protection of Wildlife Habitat

PStorm Damage Prevention Bureau of Resource Protection - Wetlands conditions attached to this Order. To the extent that the

specifications, or other proposals submitted with the Notice

Exprevention of Pollution following conditions modify or differ from the plans.

of Intent, these conditions shall control.

## Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

# WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, Section 40

### B Findings (Cont.)

### Denied because:

The proposed work cannot be conditioned to meet the performance standards set forth in the wellands regulations to protect those interests checked above. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect these interests, and a final Order of Conditions is issued.

Eithe information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetisrids Protection Act. Therefore, work on this project may not go forward unless and until a revised Natice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. A description of the specific information which is tacking and why it is necessary is attached to this Order as par 310 CMR 10.05(b)(c).

#### General Conditions

- Fallure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
- This Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
- This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
- 4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
- a) the work is a maintenance dradging project as provided for in the Act; or
- b) the time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set for as a special condition in this Order.
- 5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order.
- Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or

- debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe tires, ashes, refrigerators, motor vehicles, or parts or any of the foregoing.
- 7. This Order does not become final until all administrative Appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
- 8. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form form must be stamped by the Registry of Deeds, prior to the commencement of the work.
- A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words. "Massachusetts Department of Environmental Protection" (or, "MA DEP") "File Number DEP File #344-712

Project File Number

- 10. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before the Department.
- Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
- The work shall conform to the following attached plans and special conditions:

Final Approved Plans (attach additional plan references as needed):

Sec attached	<u> </u>
Title	
Dated	
Signed and Stamped by	
On file with	

Page 2 of 5

### Massachusetts Department of Environmental Protection Bureau of Resource Protection - Wetlands

### WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, Section 40

### B Findings (Con't)

- 13. Any changes to the plans identified in Condition #12 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
- 14. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to the Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data documed necessary by the Conservation Commission or Department for that evaluation.
- 15. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.
- 16. Prior to the start of work, and if the project involves work adjacem to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall serve as the limit of Work (unless another limit of work line has been noted in the plans of record) and be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
- 17. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At not time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basts and shall remove

Special Conditions (Use additional paper if necessary).

Additional conditions relating to municipal law, bylaw, or ordinance:

See attached

Findings as to municipal law, bylaw, or ordinance

Furthermore, the

Wilmington
Conservation Commission

hereby finds (check on that applies):

Other the proposed work cannot be conditioned to meet the standards set forth in a municipal law, ordinance, or bylaw. Specifically

Name and citation of municipal law, bylaw or ordinance

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

Other the following additional conditions are necessary to comply with a municipal law, bylaw, or ordinance, specifically.

Name and citation of municipal law, bylaw, or ordinance

The Commission orders that all the work shall be performed in accordance with the said additional conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

### Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

### WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, Section 40

### B Findings (cont.)

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

2/17/2000

Date

This Order must be signed by a majority of the Conservation Commission. The Order must be mailed by certifled mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate regional office of the Department of Environmental Protection.

Signatures:	
Edd Fills	Ilene S.L.
Medant In whoman	market of an
Loa & Brothers	

On this 16<sup>th</sup> day of February, 2000 before me personally appeared all of the above members, to me known to be the person described in, and who executed, the foregoing instrument, and acknowledged that he/she executed the same as his/her free act and deed.

Noter Public Waterman Reed

February 21, 2003
My commission expires

This Order is issued to the applicant as follows:

by hand delivery on: \_

by certified mail, return receipt requested, on:

2/17/2000

## C Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hareby notified of their right to request the appropriate Department of Environmental Protection Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department with the appropriate filing fee and a completed Appendix E; Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order.

A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not appellant. The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wellands Protection Act (M.G.L. c. 131, section 40 and is inconsistent with the wellands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal by law, and not on the Massachusetts Wellands Protection Act or regulations, the Department of Environmental Protection has no appellate jurisdiction.

# Massachusetts Department of Environmental Protection Buteau of Resource Protection - Wellands

## WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, Section 40

D Recording Information	noue	Informa	Recording	D
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This Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information shall be submitted to the

Conservation Commission	Company of the second s
on the form below, which must be stamped by the	Registry of Deeds.
**************************************	
TO: Wilmington Conservation Commission	
Conservation Commission	
(date).	
If recorded land, the instrument number that iden	tifies this transaction is:
If registered land, the document number that iden	tifies this transaction is:
Signature of Applicant;	

# ORDER OF CONDITIONS #344-712

51 Eames Street map 37 parcel 10 Olin Corporation (applicant)

### SPECIAL CONDITIONS:

(Please review the General Conditions on previous page.)

- 18. The work shall conform to the following plans and documents, unless otherwise specified in this Order:
  - a) Notice of Intent filed by Wetlands Preservation Inc.
  - b) Plan entitled "Release Abatement Measure Plan (Drum Removal)" dated 1/20/00, signed and stamped by Gregory R. Corcoran, PLS.
  - c) "Release Abatement Measure Plan" (document) dated 1/18/00, prepared by Law Engineering and Environmental Services, Inc.
- 19. According to the submitted plan, the proposed work is within the one hundred foot buffer zone of bordering vegetated wetland. However, it is possible that contaminated soils will need to be removed within bordering vegetated wetland. No work within bordering vegetated wetland shall occur without notification of the Planning & Conservation department. A wetland scientist shall be present daily while work within bordering vegetated wetland occurs.
- 20. Prior to the start of any work, and in compliance with condition number 9, a sign shall be displayed showing D.E.P. File No. 344-712. This sign shall not be posted on a live tree.
- 21. This document and the approved plans shall be included in all construction contracts and subcontracts for the proposed work and shall supersede any conflicting contract requirements. It shall also be kept on file at the job site at all times during construction. Thereafter, the contractor shall be held jointly liable for any violation of this Order.
- 22. Prior to any work on site the Applicant or his agents shall meet with an agent of the Commission on the site to review the proposed work and measures designed to mitigate any impact on wetlands and to ensure that all of the Conditions of this Order are understood. The applicant's wetland consultant shall be present at this meeting.
- 23. Worland boundary markers (flags) shall be maintained until all construction activity is completed.
- 24. Prior to any activity on the site, a siluation fence shall be placed between all excavation areas

Order of Conditions #344-712
Olin Corporation
Special Conditions Page 2

and wetlands. This erosion control shall act as a limit of work. The erosion control barrier will be properly installed (trenched and toed-in) and placed according to the approved plan and shall be inspected and approved by the WCC prior to the start of construction. This barrier shall remain intact until all disturbed areas have been permanently stabilized to prevent erosion.

- 25. The Applicant shall notify the Conservation Commission immediately and move swiftly to control any erosion problems that occur on site. Any other erosion and sediment controls found to be necessary by the Commission or its Agent during construction shall be implemented by the Applicant.
- 26. There shall be no stockpiling of any soil or other materials within twenty-five (25) feet of any resource areas without the express written permission of the Conservation Commission.
- 27. Any dewatering activities on the project must be approved by the Commission's agent prior to implementation. There shall be no direct discharge of water to wetlands or eatch basins.
- 28. Equipment fuel storage and refueling operations shall be situated in an upland area at a horizontal distance greater than 100 feet from wetland resource areas.
- 29. All disturbed areas, slopes and proposed landscape areas shall be loamed and seeded or crosion controlled in accordance with NRCS (Natural Resources Conservation Service) specifications on file with the WCC. All disturbed areas shall be permanently stabilized by vegetation or as otherwise shown on the above-referenced plans, within 60 days of final grading for this project.
- 30. If any unforeseen problem occurs during construction which affects any of the eight statutory interests of the Wetlands Protection Act, upon discovery, the Applicant shall notify the Commission immediately and a meeting shall be held between the Commission (or its Agent), the Applicant and other concerned parties to determine the correct measures to be employed. The Applicant shall then act to correct the problems using the corrective measures agreed upon.
- 31. With respect to all conditions the Wilmington Conservation Commission designates the Assistant Director of Planning & Conservation as its administrative agent with full powers to act on its behalf in administering and enforcing this Order.
- 32. The members and agents of the Conservation Commission shall have the right to enter the site to verify compliance with the Order, to perform their duties under M.G.L. Chapter 131, s.40, as amended, and to require the submittal of any additional data deemed necessary by the Commission for that verification, prior to issuance of a Certificate of Compliance.
- 33. Upon completion of this project the Applicant shall submit the following to the Conservation Commission to receive a Certificate of Compliance per DEP Condition #11: (1) a letter from the Applicant requesting a Certificate of Compliance for DEP File # 344-712, (2) a written statement from a registered professional civil engineer of the Commonwealth certifying that

Order of Conditions #344-712
Olin Corporation
Special Conditions Page 3

the work has been completed in compliance with this Order of Conditions and the approved plans referenced herein (or approved revisions). Any discrepancies shall be noted, (3) an asbuilt topographic plan signed and stamped by a registered professional land surveyor of the Commonwealth, for the public record. (4) a letter from a qualified wetland scientist certifying compliance with state regulations and this Order of Conditions regarding wetland restoration.

- 34. All re-vegetation (of buffer zone and bordering vegetated wetland) shall be performed according to the Notice of Intent, unless otherwise specified in this Order. The Commission reserves the right to require additional plantings to ensure good cover density with indigenous species.
- 35. All disturbed areas located within wetland resource areas which are to be only temporarily disturbed during project shall be restored to their original grade and vegetative cover. The area must be 75% re-vegetated with species similar to those disturbed within two growing seasons. A qualified wetland/wildlife biologist shall monitor and supervise the wetland restoration over two growing seasons and shall provide detailed written reports describing the progress and functionality of the restoration area to the Commission after each growing season following initial construction of these areas

Conservation Commission Please be advised that the Map 37 Parcel 10 DEP File	Order of Conditions for the project at Olir # 344-712 has been recorded at the Reg has been noted in the chain of title of the	gistry of Deeds of affected property in Book
If recorded land, the instru	ment number that identifies this transaction	on is:
If registered land, the docur	ment number that identifies this transaction	on is:
Signature of Applicant:	David W Camery	
. ————————————————————————————————————	Donald W. Cameron/Olin Corporati	on 💆
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Starped recept market

Drum Removal RAM, Status Report No. 2 and Completion Statement Olin Corporation July 12, 2001

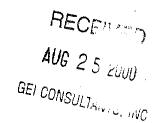
NPDES PERMIT EXCLUSION



### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1

JOHN F. KENNEDY FEDERAL BUILDING BOSTON, MASSACHUSETTS 02203-0001



25 August 2000

Steve Morrow Olin Corporation 1186 Lower River Road Charleston, TN 37310

Re:

NPDES Permit Exclusion for construction dewatering in Wilmington, MA

NPDES Permit Exclusion Reference #00-177

Dear Mr. Bruett:

Based on the information provided by Margaret Hanley of GEI Consultants, Inc., you are granted, pursuant to Title 40 of the Code of Federal Regulations, Part 122.3(d), an exclusion from the requirement for a permit under the National Pollutant Discharge Elimination System (NPDES) in order that groundwater recovery and treatment operations may be performed in a timely fashion. Because the purpose of this exclusion from the regulations is for dewatering operations, the exclusion will be in effect for two months from system start-up.

Subject to other controls which may be established by the State of Massachusetts and the Town of Wilmington, you are authorized to discharge up to 250 gallons of water per minute through fractionization tanks, filtration units, and a liquid phase granular activated carbon units (all in series) prior to discharge to Aberjona River. The discharge must be done in accordance with the following provisions:

- 1. No discharge of oil, sufficient to cause a sheen (as defined in 40 CFR 110), occurs to the drainage system. The discharge of a sheen of oil, or gasoline, constitutes an oil spill and must immediately be reported to the National Response Center (NRC) at (800) 424-8802.
- 2. Security provisions are maintained to assure that system failure, vandalism, or other incident will be addressed in a timely fashion, preventing the loss of oil or contaminated water to the storm water drainage system.
- 3. Sampling and analysis, in accordance with EPA Methods, must be performed for the following chemicals with the listed limits being applicable:

Benzene 5 ppb
Toluene \*
Ethyl Benzene \*
Xylenes \*
The total for Benzene, Toluene, -----

Ethyl Benzene, and Xylenes (BTEX)	100 ppb
Total Petroleum Hydrocarbons	5 ppm
Methyl Tert-Butyl Ether	70 ppb
Acenaphthene	100 ppb
Dibenzo(a,h)anthracene	0.3 ppb
Fluoranthene	100 ppb
Fluorene	100 ppb
Naphthalene	100 ppb
Phenanthrene	100 ppb
Pyrene	100 ppb
2-Methylnaphthalene	100 ppb
Anthracene	100 ppb
Chrysene	0.2 ppb
Benzo(b)fluoranthene	0.2 ppb
Benzo(k)fluoranthene	0.2 ppb
Benzo(a)pyrene	0,2 ppb
Indeno(1,2,3-cd)pyrene	0.4 ppb
Arsenic	50 ppb
Barium	2000 <del>բ</del> բե
Chromium	100 <del>pp</del> b
Lead	15 ppb
Copper	1300 ppb
Nickel	100 <del>pp</del> b

The above standards are based upon submitted contaminant information. Should future sampling indicate the presence of additional chemicals, those new chemical levels should not exceed the federal Drinking Water Standards or 100 ppb, whichever is lower, in the effluent.

Solids - These waters shall be free from floating, suspended, and settleable solids in concentrations or combinations that would impair any use assigned to this class, that would cause esthetically objectionable conditions, or that would impair the benthic biota or degrade the chemical composition of the bottom.

Color and Turbidity - These waters shall be free from color and turbidity in concentrations or combinations that are esthetically objectionable conditions or that would impair the use assigned to this class.

Laboratory samples must be obtained from the influent to treatment and from the effluent to the drainage system once each day for the first, third and sixth day of discharge. These samples must be analyzed with a 72-hour turnaround time. If the system is working properly, sampling for the remainder of the month shall be weekly, and then monthly

thereafter. The turnaround time for these samples shall ensure that no more than seven days pass between the sampling event and when the results are received and reviewed by GEI Consultants, Inc.

If analysis indicates that the effluent limits have been exceeded, the system must be shut down immediately and the problem corrected. Upon restarting the system, a sample must be taken and there must be 24 hour turnaround for the results. If the analysis indicates that the problem has been corrected, then the sampling schedule shall resume. If not, then the system shall be shut down again and fixed.

Analytical Reports, with quality control information, are to be reported to the DEP Project Manager, and to the undersigned NPDES permit exclusion writer of this office, by the 28th of the following month, using the NPDES exclusion reference number assigned above.

- 4. You provide 24 hours notice of the anticipated start-up of discharge, if start-up begins after 31 August 2000.
- 5. You maintain copies of all analytical reports, and quality control information for a period of 3 years from the date of the report.

This exclusion may also be adjusted verbally if operational conditions require (ie; equipment failure or weather).

If any questions should arise, please do not he sitate to contact me at (617) 918-1257.

Sincerely,

Desiree A. Moyer
On-Scene Coordinator

Emergency Response Section

cc:

S. Sarker

R. Kuhit

Data Base Unit

M. Hanley

**EPA-Permits** 

MA DEP-OWM

MA DEP-DSHW- Northeast Region

GEI Consultants, Inc.

Drum Removal RAM, Status Report No. 2 and Completion Statement Olin Corporation July 12, 2001

# **Appendix D**

**Results of Disposal Testing** 

Table D1.

Disposal Characterization for Drum Area A Soil
Olin Chemical Property
51 Eames Street, Wilmington, MA

Parameter	Method	Units	RCS-1	Soil UCLs	MA Unlined Landfill Reuse Criteria	Rochester Approval Criteria	1140-DA-SP16A 10/27/00
Volatile Organics (VOCs) 2,4,4-Trimethyl-1-pentene 2,4,4-Trimethyl-2-pentene Ethylbenzene m+p- Xylene	82 <b>6</b> 0B	mg/kg	100 100 80 500	10,000			
p-isopropyltoluene Total VOCs					<4		
Semivolatile Organics (SVOCs) bis(2-Ethylhexyl)phthalate Di-n-butyl phthalate N-Nitrosodiphenylamine	8270C	mg/kg	100 50 100	10,000			
Total SVOCs					<100		
Total PCBs	8082	mg/kg	2	100	<2	<50	
Total Pesticides Total Metals	8081A 6010B	mg/kg mg/kg					
Arsenic Barium Cadmium Chromium		·	30 1,000 30 1,000	300 10,000 800 10,000	<40 <30 <1,000		
Lead Mercury Selenium Silver	7471A		300 20 400 100	6,000 600 10,000	<1,000 <10		
	DDO 904E			2,000	-0.500		
Total Petroleum Hydrocarbons TCLP VOCs TCLP SVOCs TCLP Herbicides TCLP Pesticides TCLP Metals TCLP Arsenic TCLP Barium TCLP Cadmium TCLP Chromium TCLP Copper TCLP Lead TCLP Mercury TCLP Nickel TCLP Selenium TCLP Silver TCLP Zinc	DRO 8015 1311/8260B 1311/8270C 1311/8151A 1311/8081A 1311/6010B	mg/kg ug/L ug/L ug/L ug/L	200	10,000	<5,000 <100,000 <1,000 <5,000 <5,000 <200 <1,000 <5,000	<5,000 <100,000 <1,000 <5,000 <5,000 <200 <1,000 <5,000	ND ND ND ND <50 400 240 < 50 < 100 <50 <0.8 <100 <50 <50 <50
Characteristics Reactivity - Hydrogen Cyanide Reactivity - Hydrogen Sulfide Flashpoint Corrosivity Specific Conductivity Solids, percent	SW846 HCN SW846 H2S SW846 1010 9040 SM18 2510B EPA 160.3	mg/kg mg/kg degrees F pH umhos/cm %			not reactive not reactive <140° F >2 or <12.5 <4,000	not reactive not reactive <140° F >2 or <12.5	< 50 < 100 > 200 6.15

#### General Notes:

- 1. Only numerical results for analytes detected in at least one sample are reported here. For a complete list of analytes and laboratory reporting limits see the labora
- 2. MCP = 310 CMR 40.0000 Massachusetts Contingency Plan, dated October 31, 1997 with revisions effective May 15, 1998.
- 3. Reportable Concentrations (e.g. RCS-1), and Upper Concentration Limits (UCLs), where identified, are cited from the MCP.
- 4. MA Unlined Landfill Criteria, where identified, are cited from "Reuse and Disposal of Contaminated Soil at Massachusetts Landfills", DEP, Policy # BWP-94-037.
- 5. Rochester Approval Criteria, where identified, are cited from "Approval Criteria", Tumkey Recycling & Environmental Enterprises, Rochester, NH.
- 6. PCBs = Polychlorinated Biphenyls
- 7. TCLP Toxicity Characteristic Leaching Procedure
- 8. ND = Not detected above laboratory reporting limit. See the laboratory data sheets for laboratory reporting limit.
- 9. mg/kg = miliigrams per kilogram
- 10. ug/L = micrograms per liter
- 11. "<" = Analyte not detected at a concentration above the specified laboratory reporting limit.

Drum Removal RAM, Status Report No. 2 and Completion Statement Olin Corporation July 12, 2001

DISPOSAL TESTING RESULTS – ROLL-OFFS (SOIL)



### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

	rvice Agreement on File? XYES NO Profile Number: WMI	<b>1</b> 6859
	Waste Generator Information	
1. 3. 5. 7. 9. 11. 13.	Generator Name: OLIN CORPORATION  Facility Street Address: 51 FAMES ST  Facility City: WILMINGTON  Zip/Postal Code: 01227  County: US  Customer Name: OLIN CORPORATION  Customer Contact: STEUE MORROW  Billing Address  Waste Stream Information  Description  a. Name of Waste: SOIL /DEBRIS DRUM KREM A	9D 00 1403104 6 - 4511
	βLμ       (describe):       ⊠Solid       □Liquid       ⊠Single Layer       ○         □ CH € Μι ε κ L       □ Gas       □Sludge       □ Multi-layer       h. pH:	
•		applicable
	DEBRIS (DRUM REMAINS) O - 10 % SEE TCLP MANLY SIS  SOIL  PHTH ALATES: O - 1,100 PFM  N-NITROSODIPHENYLAMING O - 20,000 PFM	entration Range
The second	k. Oxidizer Pyrophoric Explosive Radioactive Carcinogen Infectious Shock Sensitive Water Reactive Notes the waste represented by this profile contain any of the Carcinogens which require OSHA notification? (list in Section B.1.j)	□YES ⊠NO □YES ⊠NO
·	o. Does the waste represented by this profile contain benzene?  If yes, concentration ppm  Is the waste subject to the benzene waste operations NESHAP?  p. Is the waste subject to RCRA Subpart CC controls?  If no, does the waste meet the organic LDR Exemption?  If no, does the waste contain <500 ppmw volatile organic (VO)?  Volatile organic concentration ppmw	□YES ⊠NO □YES ⊠NO □YES ⊠NO □YES ⊠NO
•	q. Does the waste contain any Class I or Class II ozone-depleting substances? r. Does the waste contain debris? (list in Section B.1.j)	□YES ☑NO
2.	Quantity of Waste         Estimated Annual Volume       GO       ☑Tons ☐Yards ☐Drums ☐Other (specify)	MONTH CONTRACTOR CONTR
3.	Shipping Information  a. Packaging:  Bulk Solid; Type/Size:  Corr / Dum P TRALEX  Bulk Liquid; Type/Size:  Other:  b. Shipping Frequency: Units  Corr Rucks  Per: Month Quarter Year One time Other:  c. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If no, skip d, e, and f)	ner □YES DanO



# GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

	Reportable Quantity (lbs.;kgs.): e. Hazard Class/ID #:	
	USDOT Shipping Name:	
ā.		
л.	Transporter/Transfer Station:	
C. Ge	nerator's Certification (Please check appropriate responses, sign, and date below.)	
1.	Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2	
**	a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D, F, K, P, U)	□YES XINO
	b. If a characteristic hazardous waste, do underlying hazardous constituents	
	(UHCs) apply? (if yes, list in Section B.1.])	•
	c. Does this waste contain debris? (if yes, list size and type in Chemical  Composition - B.1.)	
	Composition - B.1.)	
2.	Is this a state hazardous waste?	□YES MNO
	Identify ALL state hazardous waste codes	<u> </u>
		•
3.	Is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up? M.C.P. 2.16 Tiex 1 M If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site clean-up activity. For state mandated clean-up, provide relevant documentation.	ØAE2 □NO
4.	Does the waste represented by this waste profile sheet contain radioactive material, or is disposal regulated by the Nuclear Regulatory Commission?	∐YES <b>⊠</b> NO
5.		
5.	Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated Biphenyls (PCBs) regulated by 40 CFR 761? (if yes, list in Chemical Composition - B.1.j)	TOVER BANG
	a. If yes, were the PCBs imported into the U.S.?	□YES KNO
e		
6.	Do the waste profile sheet and all attachments contain true and accurate descriptions of the waste material, and has all relevant information within the possession of the Generator regarding known or suspected hazards pertaining to the waste been disclosed to the Contractor?	Mayes □no
_		MILES DIVO
7.	Will all changes which occur in the character of the waste be identified by the Generator and disclosed to the Contractor prior to providing the waste of the waste be identified by the Generator and disclosed	
	to the Contractor prior to providing the waste to the Contractor?	<u>K</u> YES □NO
Chec	k here if a Certificate of Destruction or Disposal is required.	
sample t agent of informat licenses	inple submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. I authorize WM from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs as the generator and has confirmed the information contained in this Profile Sheet from information provided by the generated ion as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary perm for the waste that has been used and defined by the approved prometry.	authorized or and additional nits and
	ation Signature: Title: SPECIALIST	
Name (	Type or Print): 57 eue Mokkew Company Name: OLIN CORPORATIONDE	te: <u>/0/43/</u> 2
	Check if additional information is attached. Indicate the number of attached page	jes
D WWW	Management's Decision FOR WM II:	
1.	Management's Decision FOR WM US  Management Method [Landfill Non-hazardous Solidification Bloremediation Incineration]	
	Hazardous Stabilization Other (Specify)	""
2.	Proposed Ultimate Management Facility:	
3.	Precautions, Special Handling Procedures, or Limitation on Approval:	
4.	Waste Form 5. Source 6. System Type	
	Waste Decision	Disapproved
	rson's Signature: Date:	
	Approval Signature (Optional): Date:	
Special	Waste Approvals Person Signature: Date:	***************************************

Roll-Off TCLP results from Waste Stream

FROM:

FAX:

Sep-19-88 Tue 18:16

PAGE: 02

### WASTE STREAM TECHNOLOGY, INC.

302 Grote Street Buffalo, NY 14207 (716) 876-5290

**Analytical Data Report** 

Report Date: 09/19/00 Group Number: 2002-233

> Prepared For : Mr. Alan Elia, Jr.

Sevenson Environmental Services, Inc. 2749 Lockport Road Niagara Falls, NY 14302

Site: Olin \ Drum Phase

Analytical Services

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ese Days
ess Days

Post-It* Fax Note	7671	Date Q 14	uscase NO
To Ored Shirles		From WST	
Canber.	T	Co.	
Phone #		Phone #	
Fex #		Fax #	

Raport Released By : Daniel W Vou

Daniel Volimer, Liaboratory QA/QC Officer

ENVIRONMENTAL LABORATORY ACCREDITATION CERTIFICATION NUMBERS

NYSDOH ELAP #11179 NJDEPE #73977

WOSTE STREAT

FROM:

Sep 29 00 11:20a

FRX:

Ser-19-00 Tue 19:16

PAGE: 83

# Waste Stream Technology, Inc.

302 Grote Street Buffalo, NY 14207 (716) 876-5290

# Analytical Data Report

Group Number: 2002-233

Site: Olin \ Drum Phase

# Field and Laboratory Information

NST ID	Client ID	Matrix	Date Sampled	Date Received	Time
W\$70889	Roll Off Box # 333	Soll	09/09/00	09/12/00	10:45
W\$70890	Roll Off Box # 293	Soil	09/09/00	09/12/00	10:45
W\$70891	Roll Off Box # 335	Soil	09/09/00	09/12/00	10:45
W\$70892	Roll Off Box # 334	. Soll	09/09/00	09/12/00	10:45
W\$70893	Roll Off Box # 498	ı Soil	09/09/00	09/12/00	10:45
W\$70894	# 120	Sludge	09/07/00	09/12/00	10:45
W\$70895	<b>#</b> 132	Solid	09/08/00	09/12/00	10:45
W\$70896	# 152	Solid	09/11/00	09/12/00	10:45

Waste Stream

FOXI

5er-19-88 Tue 18:16

PAGE: 84

p.5

### ORGANIC DATA QUALIFIERS

- U-Indicates compound was analyzed for but not detected.
- Jindicates an estimated value. This flag is used to qualify the following: when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed; a compound is detected in the sample but the result is less than the method quantitation limit but greater than the statistically calculated laboratory method detection limit; the result for a compound is estimated due to the analysis of a sample beyond th USEPA defined holding time; the result for a compound is estimated due to a quality control sample result that is outside the laboratory quality control recovery limits.
- C -This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B -This flag is used when the analyte is found in the associated blank as well as the sample.
- E-This flag identifies all compounds whose concentrations exceed the calibration range of the GC/MS instrument of that specific analysis
- This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G -Matrix spike recovery is greater than the expected upper limit of analytical performance.
- Matrix apike recovery is less than the expected lower limit of analytical mance.
- # --Indicates that a surrogate recovery was found to be outside the expected limits of analytical performance.
- indicates that the surrogate compound was diluted out. The sample had to be diluted to obtain analytical results and a recovery could not be calculated.
- (%) -Indicates that the compound is a surrogate and that the value reported for this compound is in percent recovery. The guality control recovery limits are Indicated in the detection limit or QC limits column.

FROM:

PAGE: 85

Waste Stream Technology, Inc. PCBs in Soil SW-845 8082

FRX:

Sevenson

Sta Olin | Drum Phase Data Sampled: 09/09/00 Data Received: 09/12/00

Group Number: 2002-233 Units: mg/Kg Matrix: Soll

WST ID: WS70889

Client ID: Roll Off Box # 333

Extraction Date: 09/14/00 Date Analyzed: 09/15/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
ared or 1016	0.05	Not detected		U
ar oor 1221	0.04	Not detected		U
aredor 1232	0.06	Not detected		์ บ
aredor 1242	0.03	Not detected	•	Ų
aredor 1248	0.02	Not detected		U
ared or 1254	0.01	Not detected		U
ar o or 1260	0.01	Not detected		U
Decachlorobiphenyl (%)		97	60- 150	•
Terrachloro-m-xylene (%)		. 73	60-150	
Dibdian England				

Dilution Factor 1

WASTE STREATT

FROM

FRXI

See-19-88 Tue 18:17

PAGE: 86

p.7

Waste Stream Technology, Inc. TCLP Metals Analysis Result Report

Ste: Olin \ Drum Phase Date Sampled: 09/09/00 Date Received: 09/12/00

Group Number: 2002-233

Units: mg/L
Matrix: TCLP Extract
TCLP Extraction Date: 09/12/00

WST ID: WS70889

Client ID: Roll Off Box # 333

Digestion Date: 09/14/00

1 1	P-12-4-11	011 mwtel ee 1.4100		•
Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Afgenic by ICP	0.045	Not detected	09/14/00	SW-846 8010
Portum by ICP	0.025	0.110	09/14/00	SW-845 5010
Caemium by ICP	0.025	Not detected	09/14/00	SW-846 6010
Chlomium by ICP	0.025	Not detected	09/14/00	SW-846 6010
Open by ICP	0.045	Not detected	09/14/00	SW-846 6010
Lead by ICP	0.075	Not detected	09/14/00	SW-846 6010
Melcury by Cold Vapor	0.001	Not delected	09/15/00	SW-846 7470
Nickel by ICP	0.025	Not detected	09/14/00	SW-846 6010
Selenium by ICP	0.095	Not detected	09/14/00	SW-846 6010
Siver by ICP	0.026	Not detected	09/14/00	SW-846 6010
7 ne by ICP	0.065	0.197	09/14/00	SW-846 6010

FRX: Sap-19-88 Tue 19:19 Waste Stream Technology, Inc. Herbicides in TCLP Extract 1311/8150 Std: Olin \ Drum Phase

Cate Sampled: 09/09/00 Date Received: 09/12/00 TC P Extraction Date: 09/12/00

Dilution Factor

Group Number: 2002-233

Units: mg/L

Matrix: TCLP Extract

WST ID: WS70889

Client ID: Roll Off Box # 333

Extraction Date: 09/13/00 Date Analyzed: 09/14/00

Detection Limit Result Compound QC Limits (%) Qualifier 0.02 2. Not detected Ü 2, TP (Silvex) 0.02 Not detected 2,4-DCPAA (%) 73 10-127

FROM

FAX:

Sevenson

Ser-19-66 Tue 16:18

PRGE: 82

### Waste Stream Technology, Inc. TCLP Pesticide Analysis 1311/8081

Set Olin\Drum Phase Due Sampled: 09/09/00 Due Received: 09/12/00

Group Number: 2002-233

Units: µg/L

Matrix: TCLP Extract

TCUP Extraction Date: 09/12/00

WST ID: WS70889

Client ID: Roll Off Box # 333

Extraction Date: 09/15/00

Date Analyzed: 09/15/00

Conpound .	Dotection Limit	Result	OC Limits (%)	Qualifier
chordane	0.350	Not detected		u T
erd <b>e</b> n	0.055	Net detected		U
gamma-BHC (Lindane)	0.016	Not detected		U
hepechlor	0.097	Not detected		U
hepachior epoxide	0.042	Not detected		U
methoxychlor	0.031	Not detected	•	. U
totabhene	1.540	Not detected		υ
Tetrichloro-m-xylene (%)		86	60-150	
Decachlorobiphenyl (%)		97	60-150	}
Daution Factor 1		******* ** 141		

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Sep-19-88 Tue 10:19

FROM:

FAX:

Waste Stream Technology, Inc. 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin \ Drum Phase
Date Sampled: 09/09/00
Date Received: 09/12/00
TC P Extraction Date: 09/12/00

Group Number: 2002-233 Units: µg/L

Matrix: TCLP Extract

WST ID: WS70889

Client ID: Roll Off Box # 333

Extraction Date: 09/15/00 Date Analyzed: 09/15/00

11	Date Allaly 2	.ea. 93/12/00	•	3
Compound	Detection Limit	Result	QC Limits (%)	Qualifier
pyriqine	10	Not detected	444 mm h Prof. ,	U
1 tichtorobenzene	10	Not detected		U
Tala cresols(o,m & p)	30	Not detected		U I
nitidbenzene	10	Not detected		ט ו
hakechloroethane	10	Not detected		U
hek chiorobuladiene	10	Not detacted		U )
2,4,4-trichtorophenol	10	Not detected	,	U
2,4,4-trichlorophenol	10	Not detected		u
2.4-finitrotaluene	10	Not detected		U
hekschlorobenzene	10	Not detected		U {
penischlorophenol	50	Not detected		U
2-Floorophenol (%)		40	21-100	
Presol-d6 (%)		27	10-94	<i>'</i>
Nirdbenzene-d5 (%)	-	75	35-114	
2-fit arobipheny! (%)		74	43 116	
2,4.4-Tribromophenol (%)	4	88 -	10-123	
Termenyl-d14 (%)		72	33-141	
Dilution Factor 1	*** ***	•• •	matter var.	4 - 1- J. Maries

MASLE ZIBERILL

FAX:

Sevenson

Sep-19-60 Tue 10:19

### Waste Stream Technology, Inc. TCLP Volatile Organics Analysis 1311/8260B

St. Olin \ Drum Phase Dee Sampled: 09/09/00 Dee Received: 09/12/00

Group Number: 2002-233

Units: µg/L Matrix: TCLP Extract

PAGE: 18

WST ID: WS70889

Client ID: Roll Off Box # 333

TCLP Date: 09/14/00 Date Analyzed: 09/15/00

1 1	and the same			
Compound	Detection Limit	Result	QC Limits (%)	Qualifie
ity chloride	100	Not detected		u
tichloroethene	50	Not detected		U
droform	50	Not detected		U
-putanone	. 1000	Not detected		U
t-lichloroethane	50	Not datected		U
arbon tetrachioride	50	Not detected		U
thoroethene :	50	Not detected	•	U
entene	50	Not detected		U
rachioroethene	50	Not detected		U
norobenzene	50	Not detected		U
fichlorobenzene	50	Not detected		U
2-Dichioroethane-d4 (%)		109	70-121	
duane-d8 (%)	*	115	81-117	
rpmofluorobenzene (%)		96	74-121	
iusion Factor 1	· ·		••	4 477

PRGE: II

FROM:

FRXI

See-19-88 Tue 18:19

Waste Stream Technology, Inc.

PCBs in Soil SW-846 8082

Ster Olin \ Drum Phase Date Sampled: 09/09/00 Date Received: 09/12/00

Group Number: 2002-233

Units: mg/Kg

Matrix: Soil

WST ID: WS70890

Client ID: Roll Off Box # 293

Extraction Date: 09/14/00 Date Analyzed: 09/18/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
ardor 1016	0 200	Not detected	dester	U
aredor 1221	0.160	Not detected		U
aredor 1232	0.240	Not detected		U
ar dor 1242	0.120	Not detected		U
ared or 1248	0.080	Not detected		U
aredor 1254	0.040	Not detected	*	U
arecor 1260	0.040	Not detected	•	U
Decichlorobiphenyl (%)		63	60-150	
Tetrachloro-m-xylene (%)		54	60-150	#
	4 <b>W</b> 4	. 4	****	* *

Digition Factor 4

Mazie zusenu

FROM:

FRX:

Sep-19-88 Tue 18:28

P98E: 12

# Waste Stream Technology, Inc. TCLP Metals Analysis Result Report

Sto Olin \ Drum Phase Date Sampled: 09/09/00 Date Received: 09/12/00 Group Number: 2002-233

Units: mg/L

Matrix: TCLP Extract

TCLP Extraction Date: 09/12/00

WST ID: WS70890

Cliant ID: Roll Off Box # 293

Digestion Date: 09/14/00

Abelyte	Detection Limit	Result	Date Analyzed	Analysis Method
Alsenic by ICP	0.045	Not detected	08/14/00	SW-846 6010
Banum by ICP	0.025	0.112	09/14/00	SW-846 6010
Carmium by ICP	0.025	Not detected	09/14/00	SW-848 6010
Chromium by ICP	0.025	Not detected	09/14/00	SW-846 6010
Copper by ICP	0.045	Not detected	09/14/00	SVV-846 6010
Lead by ICP	0.075	Not detected	09/14/00	SW-845 5010
Melcury by Cold Vapor	0.001	Not detected	09/14/00	SW-846 7470
Nutri by ICP	0.025	Not detected	09/14/00	SW-846 6010
Selenium by ICP	0.095	Not detected	09/14/00	SW-846 6010
Silver by ICP	0.025	Not detected	09/14/00	SW-846 6010
Znc by ICP	0.065	0.111	09/14/00	SW-846 6010

p.14

FROM FRKE

Sep-19-88 Tue 18:28

PAGE: 13

Waste Stream Technology, Inc.

Herbicides in TCLP Extract 1311/8150

See Olin \ Drum Phase

Date Sampled: 09/09/00 Date Received: 09/12/00

TOUP Extraction Date: 09/12/00

Group Number: 2002-233

Units: mg/L

Matrix: TCLP Extract

WST ID: WS70890

Client ID: Roll Off Box # 293

Extraction Date: 09/13/00

Date Analyzed: 09/14/00

**Detection Limit** Result QC Limits (%) Qualifier Compound 0.02 Not detected -TP (Silvex) 0.02 Not detected IJ 2. - DCPAA (%) 64 10-127

Dilution Factor

WASTE STREAM

FRX:

5ep-19-88 Tue 18121

PASE: 14

# Waste Stream Technology, Inc.

TCLP Pesticide Analysis 1311/8081

Site: Ofin \ Drum Phase
Late Sampled: 09/09/00
Date Received: 09/12/00
TO P Extraction Date: 09/12/00

Group Number: 2002-233

Units: µg/L

Matrix: TCLP Extract

WST ID: WS70890

Client ID: Roll Off Box # 293

Extraction Date: 09/15/00 Date Analyzed: 09/15/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifler
chidrdane	0.350	NoI detected	· AP NOW PERM	Ū
a digin	0.055	Not detected	•	U
gan ma-BHC (Lindane)	0.016	Not detected		U
negachior	0.097	Not detected		U
nepachlor epoxide	0.D42	Not detected		U
nehoxychior	0.031	Not detected		Ü
ck: phene	1.540	Not detected		υ
letachloro-m-xylene (%)		75	60-150	
Decachlorobiphenyl (%)		92	60-150	
Diution Factor 1		,	· / 1 4 *********************************	•

WASTE STREET

FQX:

Sem-19-88 Tue 18:21

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#### Waste Stream Technology, Inc. 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin \ Drum Phase
Date Sampled: 09/09/00
Date Received: 09/12/00
TO P Extraction Date: 09/12/00

Group Number: 2002-233

Units: µg/L Matrix: TCLP Extract

WST ID: WS70890

Client ID: Roll Off Box # 293

Extraction Date: 09/15/00 Date Analyzed: 09/15/00

	Date (410)		0		1
Compound	Detection Limit	Result	QC Limits (%)	Qualifier	Γ
pyrdine	10	Not detected	17 m r 41 m	ับ	l
1 dichlorobenzene	10	Not detected		U	
Tetal cresols(o,m & p)	30	Not detected		U	l
nirebenzene	10	Not detected		U	ĺ
hexachloroethane	10	Not detected		U	ĺ
hexachiorobutadiene	10	Not detected		U	İ
2.45-trichiorophenoi	10	Not detected		U .	l
2 5-trichlorophenol	10	Not datected		U	í
2 4 dinitrotoluene	10	Not detected		U	İ
hexachlorobenzene	10	Not detected		U	!
pertachlorophenol	50	Not detected		U	į
2.Fuorophenol (%)		40	21-100	Ì	İ
Planol-d6 (%)		28	10-94	ļ	ļ
Ntrpbenzene-d5 (%)	•	74	35-114		į
2 Juorobiphenyi (%)		73	43-116	,	i
2 5-Tribromophenol (%)		89	10-123		İ
Terphenyl-d14 (%)		70 .	33-141		İ
Dilution Factor	•		• • • • • • • • • • • • • • • • • • • •		į

FROM

FAX:

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Group Number: 2002-233

# Waste Stream Technology, Inc.

TCLP Volatile Organics Analysis
1311/8260B

Ste: Olin \ Drum Phase Date Sampled: 09/09/00 Date Received: 09/12/00 1311/8250B

WST ID: WS70890

Client ID: Roll Off Box # 293

TCLP Date: 09/14/00

Date Analyzed: 09/15/00

890 ff Box # 293		Units: Matrix:	µg/L TCLP Ext	act
00		**		
700				
sult	QC Limits (%)	(	Jualifler	

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
viey chloride	100	Not detected	•	ַ <u>' ' '</u> י
1 tichlomethene	50	Not detected		U
chicroform	50	Not detected		U
2-putanone	1000	Not detected		U
1,2-dichloroethane	50	Not detected	•	U
cart on tetrachloride	50	Nat detected		U
tricilioroethene	50	Not detected		U
bonzene	50	Not detected		U
te rachiorpethene	50	Not detected		U
citorobenzene	50	Not detected		U
1,1 dichlorobenzene	50	Not detected		U
1.2 Dichloroethene-d4 (%)		102	70-121	į
Teluene-d8 (%)		114	81-117	
Bonofluorobenzene (%)		95	74- 121	
Division Factor 1	*			

WASTE STREAM

FROM

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Sevenson

#### Waste Stream Technology, Inc.

PCBs in Soll SW-846 8082

e: Olin \ Drum Phase thate Sampled: 09/09/00 pare Received: 09/12/00

Group Number: 2002-233

Units: mg/Kg Matrix: Soil

WST ID: WS70891

Client ID: Roll Off Box # 335

Extraction Date: 09/14/00 Date Analyzed: 09/15/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifler
aloclor 1016	0.05	Not detected		ut
a o lor 1221	0.04	Not detected		U
a pelor 1232	0.06	Not detected		U
applor 1242	0.03	Not detected		U
applor 1248	0.02	Not detected		U .
arbeior 1254	0.01	Not detected		U
erpelor 1260	0.01	Not detected		U {
Dedachlorobiphenyl (%)		63	60-150	j
Tetrachtoro-m-xylene (%)		54	60-150	#
Dution Factor 1	•			•

Sia Olin \ Drum Phasc Date Sampled: 09/09/00 Date Received: 09/12/00

FROM:

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# Waste Stream Technology, Inc.

TCLP Metals Analysis Result Report

Group Number: 2002-233

Units: mg/L Matrix: TCLP Extract

TCLP Extraction Date: 09/12/00

WST ID: WS70891

Client ID: Roll Off Box # 335

Digestion Date: 09/14/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Asenic by ICP	0.045	Not detected	09/14/00	SW-846 6010
Barum by ICP	0.025	0.115	09/14/00	SW-846 6010
Carmium by ICP	0.025	Not detected	09/14/00	SW-846 6010
Chromium by ICP	0.025	Not detected	09/14/00	SW-846 6010
Copper by ICP	0.045	0.106	09/14/00	SW-846 6010
Lead by ICP	0.075	Not detected	09/14/00	SW-846 6010
Melcury by Cold Vapor	0.001	Not detected	09/14/00	SW-846 7470
Nokel by ICP	0.025	Not detected	09/14/00	SW-846 6010
Selenium by ICP	0,095	Not detected	09/14/00	SW-846 6010
Siver by ICP	0.025	Not detected	09/14/00	SW-846 6010
Znc by ICP	0.066	0.579	09/14/00	SW-846 6010

PAGE: 19 Sep-19-00 Tue 10:23 FROM FAXI Waste Stream Technology, Inc. Herbicides in TCLP Extract 1311/8150 Group Number: 2002-233 Sit: Olin | Drum Phase Cale Sampled: 09/09/00
Dale Received: 09/12/00
TC\_P Extraction Date: 09/12/00 Units: mg/L Matrix: TCLP Extract WST ID: WS70891 Client ID: Roll Off Box # 335 Extraction Date: 09/13/00 Date Analyzed: 09/14/00 Detection Limit Result QC Limits [%] Qualifier Chippound 2,5-D 2,5-TP (Silvex) 2,5-DCPAA (%) 0.02 Not detected U Not detected U 0.02 62 10-127

•

Dautien Factor

WASTEST AT

FROM:

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#### Waste Stream Technology, Inc. TCLP Pesticide Analysis 1311/8081

Ster Olin \ Drum Phase
. Date Sampled: 09/09/00
Date Received: 09/12/00
TCIP Extraction Date: 09/12/00

Group Number: 2002-233

Units: µg/L

Matrix: TCLP Extract

WST ID: WS70891

Client ID: Roll Off Box # 335

Extraction Date: 09/15/00 Date Analyzed: 09/15/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chordane	0.350	Not detected	• •	U
ertien	0.055	Not detected		U
germa-BHC (Lindane)	0.016	Not detected		U
heptachlor	. 0.097	Not detected		U
hebachlor epoxide	0.042	Not detected		U
methoxychlor	0.031	Not detected		U
tozephene	1.540	Not detected	•	ับ
Tetrachioro-m-xylene (%)	•	78	60-150	
Decachiorobiphenyl (%)	•	96	60-150	
Diution Factor 1				

FROM

FRXI

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#### Waste Stream Technology, Inc. 8270 TCLP Semivolatile Organics 1311/8270

Sile Ofin \ Drum Phase Date Sampled: 09/09/00 Date Received; 09/12/00

TOUP Extraction Date: 09/12/00

Group Number: 2002-233

Units: µg/L

Matrix: TCLP Extract

WST ID: WS70891

Client ID: Roll Off Box # 335

Extraction Date: 09/15/00 Date Analyzed: 09/15/00

Compound	tretection Limit	Result	QC Limits (%)	Qualifler
py lidine	. 10	Not detected	appa a r i tor	U
1,4-dichlorobenzene	· 10	Not detected		U
Total cresols(o,m & p)	30	Not detected		U
nit openzene	10	Not detected		U
hekachloroethane ·	10	Not detected		U
hekachiorobutadione	10	Not detected		U
2,4,6-trichlorophenol	10	Not detected		U
2,4,5-trichlorophenol	10	Not detected	•	U
2,4-dinitrotoluene	10	Not detected		U
hckachlorobenzene	10	Not detected		U
penachlorophenol	50	Not detected		U
2-Filiorophenol (%)		41	21-100	
Phenol-d6 (%)		28	10-94	
Nirobenzene-d5 (%)	•	74	35-114	
2-Filiorobiphenyl (%)	•	73	43-116	
2. , 5-Tribromophenal (%)		87	10- 123	
Terphenyl-d14 (%)		72	33-141	
Distion Factor 1	· · · · · · · · · · · · · · · · · · ·			

FROM:

FAXI

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#### Waste Stream Technology, Inc. TCLP Volatile Organics Analysis 1311/8260B

Sile Olin \ Drum Phase Date Sampled: 09/09/00 Data Received: 09/12/00 Group Number: 2002-233 Units: µg/L

Matrix: TCLP Extract

WST ID: WS70891

Client ID: Roll Off Box # 335

TCLP Date: 09/14/00 Date Analyzed: 09/15/00

Compound	Lietec	tion Limit	Result	QC Limits (%)	Qualifier
vir v chloride		100	Not detected	•• • • • • • • • •	U · ·
1.1-dichloroethene	·	50	Not detected		U
ch p oform		60	Not detected		- U
2-luranone		1000	Not detected		U
1,2-dichloroethane		50	Not detected		U
ca bon tetrachloride		50	Not detected		U
trighproethene		50	Not detected		U
benzene		50	Not detected		U
tetrachloroethene		50.	Not detected		U
cholobenzene	•	50	Not detected		U
1,4-dichlorobenzene		50	Not detected		U
1,1-Dichloroethane-d4 (%)	•		106	70-121	•
Toluene-d8 (%)			114	81-117	
Branofluorobenzene (%)			94	74-121	•
Dilution Factor 1			•••		

Sile Olin \ Drum Phase Date Sampled: 09/09/00 Date Received: 09/12/00

Dilution Factor 1

FROM

FAX:

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#### Waste Stream Technology, Inc.

PCBs in Soil

SW-846 8082

Group Number: 2002-233

Units: mg/Kg

Matrix: Soil

WST ID: WS70892

Client ID: Roll Off Box # 334

Extraction Date: 09/14/00 Date Analyzed: 09/15/00

Compound	Datection Limit	Result	QC Limits (%)	Qualifier
argoor 1016	0.05	Not detected	4	ໍ ປ ]
arecor 1221	0.04	Not detected	•	U
ardor 1232	0.06	Not detected		U
ared or 1242	0.03	Not detected		υ
ы dor 1248	0.02	Not detected		u
ared or 1254	0.01	Not detected		U
ared or 1260	0.01	Not detected		u
December of the December of th		94	60-150	
Terrachioro-m-xylene (%)		58	60-150	#

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FAX:

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# Waste Stream Technology, Inc. TCLP Metals Analysis Result Report

Sis Olin \ Drum Phase Date Sampled: 09/09/00 Date Received: 09/12/00 Group Number: 2002-233

Units: mg/L

Matrix: TCLP Extract

TCLP Extraction Date: 09/12/00

WST ID: WS70892

Client ID: Roll Off Box # 334

Digestion Date: 09/14/00

Adiyte	Detection Limit	Result	Date Analyzed	Analysis Method
Asenic by ICP	7,045	Not detected	09/14/00	SW-848 6010
Barum by ICP	0.025	0.166	09/14/00	SW-846 6010
Cadmium by ICP	),025	0.054	09/14/00	SW-846 6010
Chromium by ICP	0.025	· Not detected	09/14/00	SW-846 6010
Copper by ICP	).045	Not detected	09/14/00	SW-848 6010
Leaf by ICP	0.075	Not detected	09/14/00	SW-846 6010
Mercury by Cold Vapor	2.001	Not detected	09/15/00	SW-846 7470
Nickel by ICP	0.025	Not detected	09/14/00	SW-846 6010
Silenium by ICP	0.095	Not detected	09/14/00	SW-846 6010
S ver by ICP	0.025	Not detected	09/14/00	SW-846 6010
Zne by ICP	0.065	0.560	09/14/00	SW-846 6010

10-127

FROM FAXI Ser-19-08 Tue 10:26 Waste Stream Technology, Inc. Herbicides in TCLP Extract 1311/8150 Group Number, 2002-233 Sile Olin \ Drum Phaso Date Sampled: 09/09/00 Units: mg/L Matrix: TCLP Extract Data Received: 09/12/00 TCUP Extraction Date: 09/12/00 WST ID: WS70892 Client ID: Roll Dff Box # 334 Extraction Date: 09/13/00 Date Analyzed: 09/14/00 Detection Limit QC Limits (%) Qualifier Compound Not detected 0.02 U Not detected .4-TP (Silvex) 0.02

92

2.4-DCPAA (%) Dilution Factor

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FRX:

Sep-19-00 Tue 10:26

PRGE: 26

### Waste Stream Technology, Inc.

TCLP Pesticide Analysis
1311/8081

Size Olin \ Drum Phase
Date Sampled: 09/09/00
Date Received: 09/12/00
TCUP Extraction Date: 09/12/00

WST ID: W870892

Cilant ID: Roll Off Box # 334

Extraction Date: 09/15/00 Date Analyzed: 09/15/00

Units: µg/L Matrix: TCLP Extract

Group Number: 2002-233

<b>2</b> 3	(2011212137			
Compound	Detection Limit	Result	QC Limits (%)	Qualifler
chodane	0.350	Not detected	& n-man hours - !	Ü
entin	0.055	Not delected		u
amma-BHC (Lindane)	0.016	0.100		
neptachior	0.097	Not detected		บ
nepechlor epoxide	0.042	Not detected		Ū
nettoxychlor	0.031	Not detected		U
ozaphene	1.540	Not detected		u
Garachioro-m-xylene (%)		86	60-150	
Decachlorobiphenyl (%)		92	60-150	
Duction Factor 1	**************************************	· • • • • • • • • • • • • • • • • • • •	988 h WW	

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FROM:

FAX:

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Group Number: 2002-233

#### Waste Stream Technology, Inc. 8270 TCLP Semivolatile Organics 1311/8270

Sta: Olin \ Drum Phase Date Sampled: 09/09/00 Date Received: 09/12/00

Diugion Factor

TCLP Extraction Date: 09/12/00

WST ID: WS70892

Client ID: Roll Off Box # 334

Extraction Date: 09/15/00 Date Analyzed: 09/15/00

Units: µg/L Matrix: TCLP Extract

Compound	<b>Detection Limit</b>	Result	QC Limits (%)	Qualifier
pyridine	10	Not detected		u T
1,1-dichlorobenzene	10 .	Not detected		U
Total cresols(o,m & p)	30	2		J
nirdpenzene	10	Not detected		U
hexachioroethane	10	Not detected		U
hexachlorobutadiene	10	Not detected		U
2.4.5-trichlorophenal	10	Not detected		U
2.1.5-trichlorophenol	10	Not detected		U
2,4-finitrotoluene	10	Not detected		U
hexachlorobenzene	. 10	Not detected		U
ponachlorophenol	· 50	Not detected		U
2-Fluorophenol (%)		39	21-100	
Phenoi-d6 (%)		18	10-94	
Nirebenzene-d5 (%)		73	35-114	ľ
2-Filiorobiphenyl (%)		71	43-116	
2.4,5-Tribromophenol (%)		28	10-123	
Terphenyl-d14 (%)	• • • • • •	73	33-141	

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Sevenson

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## V/aste Stream Technology, inc.

TCLP Volatile Organics Analysis
1311/82608

Site: Olin \ Drum Phase Date Sampled: 09/09/00 Date Received: 09/12/00

Group Number: 2002-233

Units: µg/L

Matrix: TCLP Extract

WST ID: WS70892

Client ID: Roll Off Box # 334

TCLP Date: 09/14/00 Date Analyzed: 09/15/00

Compound	Letection Limit	Result	QC Limits (%)	Qualifier	r
viny chloride	100	Not detected	remoter a grante	Ū	厂
1,1 dichloroethene	. 50	Not detected		U	İ
chloroform	50	Not detected		U	Ì
2-putanone	1000	Not detected		U	
1,2-dichloroethane	50	Not detected		U	
carton tetrachloride	50	Not detected		U	
trictoroethene	50	Not detected		U	
benzene	. 50	Not detected		U	ĺ
te rachiornethene	50	Not detected		U	
chcrobenzene	50	Not detected		U :	ļ
1,4-dichlorobenzene	50	Not detected		U	ĺ
1,8-Dichloroethane-d4 (%)	•	100	70-121	ı	ĺ
Taluene-d8 (%)		110	81-117		
Bronofluörobenzene (%)		96	74-121		<b>l</b>
Diusion Factor . 1	•	w emones on t	- <del> </del>		

FROM:

FRX:

5ep-19-00 Tue 10:27

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#### Waste Stream Technology, Inc.

PCBs in Soil SW-846 8082

Sta: Olin \ Drum Phase Date Sampled: 09/09/00 Date Received: 09/12/00

Group Number: 2002-233

Units: mg/Kg

Matrix: Soil

WST ID: WS70893

Client ID: Roll Off Box # 498

Extraction Date: 09/14/00 Date Analyzed: 09/15/00

Cempound	Detection Limit	Result	QC Limits (%)	Qualifier
arodor 1016	0,05	Not detected	The second secon	์ บ " ำ โ
arodor 1221	0.04	Not detected		. u
arpdor 1232	0.06	Not detected		u
arpdor 1242	D.03	Not detected		U
arbdor 1248	0.02	Not detected		υ
arpdor 1254	0.01	Not detected		υ
arpdor 1260	0.01	Not detected		u
Decachiorobiphenyl (%)		30	60-150	#.
Tetrachloro-m-xylene (%)		35	60-150	#
	1 4 90 414 60 5		•	• 1

Daukion Factor 1

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Waste Stream Technology, Inc. TELP Metals Analysis Result Report

: Olin \ Drum Phase Date Sampled: 09/09/00 Date Received: 09/12/00

Group Number: 2002-233

Units: mg/L
Matrix: TCLP Extract
TCLP Extraction Date: 09/12/00

WST ID: WS70893

Client ID: Roll Off Box # 498

Digestion Date: 09/14/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Asenic by ICP	0.045	Not detected	09/14/00	SW-846 6010
Barum by ICP	0.025	0.460	09/14/00	SW-846 6010
Oxomium by ICP	0.025	0.103	09/14/00	SW-846 6010
Chromium by ICP	0.025	0.098	09/14/00	SW-846 6010
Opper by ICP	0.045	Not delected	09/14/00	SW-846 6010
Led by ICP	0,075	Not detected	09/14/00	SW-846 6010
Me cury by Cold Vapor	0.001	Not datected	09/14/00	SW-846 7470
Nickel by ICP	0.025	0.028	09/14/00	SW-846 6010
Selenium by ICP	0.095	Not detected	09/14/00	SW-846 6010
Siver by ICP	0.025	Not detected	09/14/00	SW-846 6010
Zne by ICP	0.065	2.52	09/14/00	SW-846 6010

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-DCPAA (%)

Dilution Factor

Sep-19-00 Tue 10:28 PAGE: 31 FROM: FAX: Waste Stream Technology, Inc. Herbicides in TCLP Extract 1311/8150 Std: Olin \ Drum Phase Group Number: 2002-233 Data Sampled: 09/09/00 Data Received: 09/12/00 Units: mg/L Matrix: TCLP Extract TOP Extraction Date: 09/12/00 WST ID: WS70893 Client ID: Roll Off Box # 498 Extraction Date: 09/13/00 Date Analyzed: 09/14/00 Detection Limit QC Limite (%) Qualifier Compound Result Not detected 0.02 U -TP (Silvex) 0.02 Not detected U

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FROM:

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Units: µg/L Matrix: TCLP Extract

Group Number: 2002-233

#### Naste Stream Technology, Inc. TCLP Pesticide Analysis 1311/8081

See Olin \ Drum Phase Date Sampled: 09/09/00 Date Received: 09/12/00 TCIP Extraction Date: 09/12/00

Client ID: Roll Off Box # 498

Extraction Date: 09/15/00 Date Analyzed: 09/15/00

WST ID: WS70893

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
choldane	0.350	Not detected	)	U
erdin	0.055	Not detected		U
gamma-BHC (Lindane)	0.016	0.180		
nepachior	0.097	Not detected	•	U
nep achlor epoxide	0.042	Not detected		U .
n thoxychlor	0.031	Not detected	•	บ
okaphene	1.540	Not detected		U
retrachioro-m-xylene (%)		86	60-150	
Decachiorobiphenyi (%)		95	60-150	
Diukion Factor 1	tion of the second of the seco		**	4 0m . 1 4 14 4 april 10m r

FROM:

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#### Waste Stream Technology, Inc. 8270 TCLP Semivolatlle Organics

1311/8270

Site: Olin \ Drum Phase
Data Sampled: 09/09/00
Data Received: 09/12/00
TOLP Extraction Date: 09/12/00

Group Number: 2002-233

Units: µg/L Matrix: TCLP Extract

WST ID: WS70893

Client ID: Roll Off Box # 498

Extraction Date: 09/15/00 Date Analyzed: 09/15/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
pytiqine	10	Not detected	1 1 m 100mm r.a. dan da	U
1 lichiorobenzene	10	Not detected		u
Total crespis(o,m & p)	30	16		j
nitopenzene	10	Not detected		U
hekechloroethane	10	Not detected		U
hekachlorobutadiene	10	Not detected		U
2,4,4-trichlorophenol	10	Not detected		U
2.4.5-trichiorophenol	10	Not detected		U
2.4-tinitrotoluene	10	Not detected		U
hekachlorobenzene	10	Not detected	i	U
pentachlorophenol	50	Not detected		U
2-Fiborophenol (%)		9	21-100	#
Phenol-d6 (%)	1	3	10-94	#
Nirdbenzene-d5 (%)		86	35-114	
2-Filorobiphenyl (%)	•	74	43-116	
2, 4-Tribromophenol (%)	1	89	10-123	
Terphenyi-d14 (%)	•	73	33- 141	
Diution Factor 1	Ņ	1 127 4 1 40 60	* * * * * * * * * * * * * * * * * * *	

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Post: T

#### Waste Stream Technology, Inc. TCLP Volatile Organics Analysis 1311/8260B

Ste: Olin \ Drum Phase Cale Sampled: 09/09/00 Date:Received: 09/12/00

Group Number: 2002-233

Units: µg/L

Matrix: TCLP Extract

WST ID: WS70893

Client ID: Roll Off Box # 498

TCLP Date: 09/14/00 Date Analyzed: 09/15/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
vily chloride	100	Not detected	w.s. #	U
1,1-dichloroethene	<sup>5</sup> 50	Not detected		U
charoform	<b>50</b>	Not detected		U
2-butanone	1000	Not detected	•	U
1.2-dichloroethane	- 50	Not detected		U
carton tetrachloride	50	Not detected		υ
trichoroethene	<b>50</b>	Not detected		U
benzene	50	Not detected	•	U
terachloroethene	50	Not detected		U
chlorobenzene	50	Not detected		υ }
1,3-dichlorobenzene	, <b>50</b>	Not detected	,	U
1,2-Dichloroethane-d4 (%)	•	113	70-121	1
Tellene-d8 (%)	i.	113	81-117	
Bionofluorobenzene (%)	•	95	74-121	
Diction Factor 1	4	• •		

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TAXI

Sep-19-00 Tue 10:38

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#### Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin \ Drum Phase Date Sampled: 09/09/00 Date Received: 09/12/00

Group Number: 2002-233

Matrix: Soil Units: mg/Kg

WET ID		Client ID	Detection Limit	Result	Date Analyzed
VY970889		Roll Off Box # 333	40.0	Not detected	09/13/00
VY970890	•	Roll Off Box # 283	40.0	Not detected	09/13/00
V <b>15</b> 70891		Roll Off Box # 335	40.0	Not detected	09/13/00
VIS70892		Roll Off 3ox # 334	40.0	Not detected	09/13/00
V <b>S</b> 70893	•	Roll Off 3ox # 498	40.0	112	09/13/00
<b>.</b> .		and the second s			

FROME

FAX:

Sep-19-80 Tue 10:32

PAGE: 36

#### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

State: Olin \ Drum Phase Date Sampled: 09/09/00 Date Received: 09/12/00

Group Number: 2002-233

Matrix: Soil Units: mg/Kg

VIST ID	Client ID		Detection Limit	Result	Date Analyzed
VY970889	Roll Off Box # 333		40.0	Not detected	09/13/00
V/570890	Roll Off flox # 293		40.0	Not detected	09/13/00
V <b>Y</b> S70891	Roll Off Hox # 335		40.0	Not detected	09/13/00
VIS70892	Roll Off Flox # 334	•	40.0	Not detected	09/13/00
V <b>13</b> 70883	Roll Off Dox#498	v*	40.0	Not detected	09/13/00
1 1	•				

FROM:

FAX:

Sevenson

-19-00 Tue 10:31

PRRF: 37

#### Waste Stream Technology, inc. pH in Solid SW-846 9045C

Site: Olin \ Drum Phase Date Sampled: 09/09/00 Date Received: 09/12/00

Group Number: 2002-233

Matrix: Soil Units: pH Units

VISTID	Client ID	Detection Limit	Result	Date Analyzed
V970889	Roll Off 30x # 333	NA	6.04	09/12/00
V/970890	Roll Off 30x # 293	NA	5.65	09/12/00
V1370891	Roll Off Jox # 335	NA	6.23	09/12/00
V <b>15</b> 70892	Roll Off Dox # 334	NA	6.76	09/12/00
VS70893	Roll Off Lox # 498	NA	8.09	09/12/00
11.		*		

FROME

FAX:

Sep-19-00 Tue 10:31

PAGE: 38

# Waste Stream Technology, Inc. Ignitability (flash point) SW-846 1010

Ste Olin \ Drum Phase Date Sampled: 09/09/00 Date Received: 09/12/00

Group Number: 2002-233

Matrix: Soil Units: \* F

We'r ID	Client ID	Detection Limit	Rosult	Date Analyzed
WS70889	Roll Off Fox # 333	NA NA	>200	09/13/00
W670890	Roll Off I ox # 293	NA	>200	09/13/00
WS70891	Roll Off Fox # 335	NA	>200	09/13/00
WS70892	Roll Off E ox # 334	NA NA	>2.00	09/13/00
WS70893	Roll Off I ox # 498	NA	>200	09/13/00

<sup>&</sup>gt; 240 = no flash detected at a tempera ure up to 200 degrees Fahrenheit.

ALAN ELIA	Waste Stream	NOLOGY NOLOGY Technology Inc.	DUE DATE	5 BD	ARE SPECIAL DEVECTION LIMITS
KEN PAISLEY		Bulfalo, NY 14207 FAX (716) 876-2412		URN AROUND TIME:	REQUIRED: YES NO Vyes please attach requirements.
0"VE: J.I.L/T. MAY	H, l	DW DRINKING WATER GW GROUND WATER SW SURFACE WATER WW WASTE WATER O OIL	SL SLUDGE SO SOIL S SOLID W MPE OTHER	UOTATION NUMBER:	is a QC Package required: YES NO If you please sitach requirements
948-658-656-	$\overline{T}$		ANALYSES TO BE	PERFORMED	
978-657-4627 DLIN-DRUM Phase	PLING	CONTAINERS C. C. C. C. C. C. C. C. C. C. C. C. C. C	N. 5/ 3		
PROJECT DESCRIPTION  SAMPLER SIGNATURE  SAMPLE LD	DATE SAMPLED TIME OF SAMPLING SAMPLE TYPE	TCLP VOCY	TALE POLICE TO THE POLICE THE POL		YPE OF CONTAINER/ OHLY OMMENTS: OFFICE USE OHLY WST, LD.
Noct of Box #1333	9-3 0730 59	3 1, 1,	1 1.1.		1 Lina / 4 oz 1270889
2 Bux# 293	0740 50	3 1 1 2	7 7 7	,	90
3 Boyest 33.5	1.075050	3 / / /	7 7 7		91
1 ROLL OFF BOX ## UAD	A 0800 70	3 1/1 / /	7 7 7		42
5 KOCK OFF BOX # 498	99 083070	3 7 7 7			4 93
6					
7					
8			·   ·		
•				·	
10 (					Į.

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DATE: TIME: RECEIVED BY: VIA FEO EXPANT DATE LINE

RELINIQUISHED BY:

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Drum Removal RAM, Status Report No. 2 and Completion Statement Dlin Corporation July 12, 2001

DISPOSAL 7	TESTING R	ESULTS – C	VERPACK	DRUMS,	<b>HAZARDOUS</b>



GENERATOR'S WASTE PROFILE SHEET Profile Number: WMI CK 5110 PLEASE PRINT IN INK OR TYPE Service Agreement on File? ☑YES ☐NO Renewal Date: A. Waste Generator Information SIC Code: 9999 CURPURATION Generator Name: OLIN (978)658-6121 51 EXMET Phone: 3. Facility Street Address: State/Province: per 1A WILMINGTON 5. Facility City: Generator USEPA/Federal ID #: M # D COIY 03/99 8. Zip/Postal Code: 7. State/Province ID #: 10. County: 12. **Customer Phone:** (423)336-451111. Customer Name: OLIN EORPORATION 423-336-4166 STEUS MARROL Customer Fax: 13. Customer Contact: 图Same as above 15. Billing Address B. Waste Stream Information Description a. Name of Waste: LUS 71815 COMPOSITE b. Process Generating Waste: DRUM EXCHUATION DRUM 157 158 165 Free liquid range d. Strong odor Physical state @ 70°F Layers c. Color Solid □Liquid Single Layer (describe): RED/BROWN Gas BLACK/WILLES CHEMICAL □Other h. pH: Range RESINS \_≥ 200°F □73-99°F □100-139°F □140-199°F Not applicable i. Liquid Flash Point: □<73°F Chemical Composition (List all constituents [including halogenated organics, debris, and UHC's] present in any concentration and submit representative analysis): Concentration Range Concentration Range Constituents Constituents 0-507. REACTIVE O-121 PPM DRUM PARTS/ DEBRIS SULFIDE 50-1007 CRESOL U-820 PPb SOLIDS SEE ATTACHED TELP 0-1.57 PPM CROMIUM 200°F FLKSH POINT ANALYSES TOTAL COMPOSITION MUST EQUAL OR EXCEED 100% □Pyrophoric □Explosive ☐Radioactive k. □Oxidizer ☐Shock Sensitive ☐Water Reactive ☐Infectious □ Carcinogen Does the waste represented by this profile contain any of the carcinogens which require OSHA ☐YES 図NO notification? (list in Section B.1.j)..... m. Does the waste represented by this profile contain dioxins? (list in Section B.1.j)...... ☐YES MINO ☐YES ☑NO n. Does the waste represented by this profile contain asbestos?..... o. Does the waste represented by this profile contain benzene?..... TYES FINO If yes, concentration Is the waste subject to the benzene waste operations NESHAP?..... TYES FINO p. Is the waste subject to RCRA Subpart CC controls?..... ☐YES MNO If yes, volatile organic concentration q. Does the waste contain any Class I or Class II ozone-depleting substances?..... ☐YES ZNO Does the waste contain debris? (list in Section B.1.j) ZYES □NO 2. Quantity of Waste **Estimated Annual Volume** ☐Tons ☐Yards ☐Drums ☐Other (specify) Shipping Information a. Packaging: Bulk Solid; Type/Size: 1-110 CALCON ☐Bulk Liquid; Type/Size: Drum; Type; Size: 5 - 85 CALLOW OUBLINE □Other:

Per: Month Quarter Year Mone time Other

KYES DNO

b. Shipping Frequency: Units

G

Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If no, skip d, e, and f).......



#### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

d	Reportable Quantity (lbs.; kgs.): e. Hazard Class/ID	#:		
f.	USDDT Shipping Name: HAZKROOUS WASTE, SOLIO N.O.S. (CAC	) M1 C	m) 9	NA . 3075
g.	Personal Protective Equipment Requirements:	. П	(USEPI	4 () 0 = () -
h.	Transporter/Transfer Station:			
e Ge	nerator's Certification (Please check appropriate responses, sign, and date below.)			•
		***************************************		. ⊠YES □N
1.	Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2	Dc	>0 <u>6</u>	— <u>№</u> ТЕЗ ∐N
	b. If a characteristic hazardous waste, do underlying hazardous constituents (UHCs) apply? (if yes, list in Section B.1.j)		MYES [N	<del></del>
	Composition - B.1.)	]	YES DN	0
2.	Is this a state hazardous waste?			. T⊠YES ⊟N
	Identify ALL state hazardous waste codes Dooc			
3.	is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up?	lean-up		
4.	Ooes the waste represented by this waste profile sheet contain radioactive material, or is disposed regulated by the Nuclear Regulatory Commission?			□YES KÇN
5.	Does the waste represented by this waste profile sheet contain concentrations of Polychlorinate Biphenyls (PCBs) regulated by 40 CFR 761? (if yes, list in Chemical Composition - B.1.j)		□YES □N	
6.	Do the waste profile sheet and all attachments contain true and accurate descriptions of the was material, and has all relevant information within the possession of the Generator regarding know suspected hazards pertaining to the waste been disclosed to the Contractor?	n or		ZYES DA
7.	Will all changes which occur in the character of the waste be identified by the Generator and dis to the Contractor prior to providing the waste to the Contractor?		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ØYES □N
□Che	k here if a Certificate of Destruction or Disposal is required.			
Any sample agent of informat licenses Certific Name (	inple submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent from any waste shipment for purposes of recertification. If this certification is made by a broker, the generator and has confirmed the information contained in this Profile Sheet from information ion as it has determined to be reasonably necessary. If approved for management, Contractor has for the waste that has been characterized and identified by this approved profile.  Title: Expression Signature:  Type or Print):  Type or Print):  Title: Expression Signature:  Title:	the under provide as all the kirci	ersigned sign of by the gen e necessary  PAL  CHARCE  RRF(07)	s as authorized erator and additic-permits and SPCCIA Date: 1(1)
	l Management's Decision	, , , , , , , , , , , , , , , , , , , ,		WINIUSEON
1.	Management Method	iation	□Incine	ration
2.	Proposed Ultimate Management Facility:			
3.	Precautions, Special Handling Procedures, or Limitation on Approval:			
4. C:-	Waste Form 5. Source 6.	_	tem Type	
	Waste Decision		Approved	□Disapprove
1	erson's Signature:	_ Date		
	n Approval Signature (Dptional):  Waste Approvals Person Signature:	Date	**************************************	
- PEC-10	Tracic Approvais Calson Signature.	Date	1.	

c - 2

## COMPOSITE FORM

Composite ID: C WS 71815

CLIENT ID	Grams
106	83
165	84
158	<u> </u>
098	84
	(* C
13/	43
126	
	4,98
	,
VARBUS	RE : A C
	9 ( 5 A F C
	1
· · · · · · · · · · · · · · · · · · ·	

#### Waste Stream Technology, Inc. pH in Solid SW-846 9045C

Site: Olin - Drum Phase Date Received: 09/27/00

Group Number: 2002-255

Matrix: Solid Units: pH Units

WST ID	Client ID	Date Sampled	Detection Limit	Result	Date Analyzed
WS71813	A - Composite	09/26/00	NA .	8.30	10/02/00
WS71814	B - Composite	09/26/00	NA ,	6.53	10/02/00
WS71815	C - Composite	09/26/00	NA	8.43	10/02/00

#### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Received: 09/27/00

Group Number: 2002-255

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Date Sampled	Detection Limit	Result	Date Analyzed
WS71813	A - Composite	09/26/00	40.0 -	Not detected	09/29/00
WS71814	B - Composite	09/26/00	40.0	Not detected	09/29/00
<del>-&gt;</del> WS71815	C - Composite	09/26/00	40.0	Not detected	09/29/00

#### Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Received: 09/27/00

Group Number: 2002-255

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Date Sampled	Detection Limit	Result	Date Analyzed
WS71813	A - Composite	09/26/00	40.0 _	40.9	09/29/00
WS71814	B - Composite	09/26/00	40.0	61.3	09/29/00
<b>WS71815</b>	C - Composite	09/26/00	40.0	121	09/29/00

## Waste Stream Technology, Inc.

#### TCLP Volatile Organics Analysis 1311/8260B

Site: Olin - Drum Phase Date Sampled: 09/26/00 Date Received: 09/27/00 Group Number: 2002-255

Units: µg/L Matrix: TCLP Extract

WST ID: WS71815 Client ID: C - Composite TCLP Date: 10/04/00

Date Analyzed: 10/05/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
vinyl chloride	100	Not detected		U
1,1-dichloroethene	50	Not detected		U
chloroform	50	Not detected		U
2-butaпone	1000	Not detected		U
1,2-dichloroethane	50	Not detected		U
carbon tetrachloride	50	Not detected		U
trichloroethene	50	Not detected	•	U
benzene	50	Not detected		U
tetrachloroethene	50	Not detected		U
chlorobenzene	50	Not detected		U
1,4-dichlorobenzerie	50	Not detected		U
1,2-Dichloroethane-d4 (%)	•	92	70-121	-
Toluene-d8 (%)		87	81-117	
Bromofluorobenzene (%)		93	74-121	

Dilution Factor

#### Waste Stream Technology, Inc.

# 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 09/26/00 Date Received: 09/27/00

TCLP Extraction Date: 10/02/00

Group Number: 2002-255

Units: ug/L

Matrix. TCLP Extrac.

WST ID: WS71815

Client ID: C - Composite

Extraction Date: 10/05/00 Date Analyzed: 10/06/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
pyridine .	100	Not detected		U
1,4-dichlorobenzene	100	Not detected		U
Total cresols(o,m & p)	300	820		•
nitrobenzene	100	Not detected		U
hexachloroethane	100	Not detected		U
hexachlorobutadiene	100	Not detected		U
2,4,6-trichlorophenol	100	Not detected		U
2,4,5-trichlorophenol	100	Not detected	•	U
2,4-dinitrotoluene	100	Not detected		U
hexachlorobenzene	100	Not detected		U
pentachlorophenol	500	Not detected		U ·
2-Fluorophenol (%)	•	40	21-100	
Phenoi-d6 (%)		20	10-94	
Nitrobenzene-d5 (%)		83	35-114	
2-Fluorobiphenyl (%)		84	43- 116	•
2,4,6-Tribromophenol (%)	ı	69	10-123	
Terphenyl-d14 (%)		83	33-141	

Dilution Factor

10

# Waste Stream Technology, Inc. TCLP Metals Analysis Result Report

Site: Olin - Drum Phase Date Sampled: 09/26/00 Date Received: 09/27/00 Group Number: 2002-255

Units: mg/L

Matrix: TCLP Extract

TCLP Extraction Date: 10/02/00

WST ID: WS71815 Client ID: C - Composite Digestion Date: 10/03/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	0.045	Not detected	10/04/00	SW-846 6010
Barium by ICP	0.025	0.948	10/04/00	SW-846 6010
Cadmium by ICP	0.025	1.57	10/04/00	SW-846 6010
Chromium by ICP	0.025	Not detected	10/04/00	SW-846 6010
Copper by ICP	0.045	Not detected	10/04/00	SW-846 6010
Lead by ICP	0.075	Not detected	10/04/00	SW-846 6010
Mercury by Cold Vapor	0.001	Not detected	10/03/00	SW-846 7470
Nickel by ICP	0.025	Not detected	10/04/00	SW-846 6010
Selenium by ICP	0.095	Not detected	10/04/00	SW-846 6010
Silver by ICP	0.025	Not detected	10/04/00	SW-846 6010
Zinc by ICP	0.065	4.27	10/04/00	SW-846 6010

#### Waste Stream Technology, Inc.

#### TCLP Pesticide Analysis 1311/8081

Site: Olin - Drum Phase Date Sampled: 09/26/00

Date Received: 09/27/00

TCLP Extraction Date: 10/02/00

Group Number: 2002-255

Units: µg/L

Matrix: TCLP Extrau.

WST ID: WS71815

Client ID: C - Composite

Extraction Date: 10/05/00 Date Analyzed: 10/05/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chlordane	0.350	Not detected		U
endrin	0.055	Not detected		U
gamma-BHC (Lindane)	0.016	Not detected		U
heptachlor	0.097	Not detected		U
heptachlor epoxide	0.042	Not detected		U
methoxychlor	0.031	Not detected		U
toxaphene	1.540	Not detected		U
Tetrachloro-m-xylene (%)		76	60-150	
Decachlorobiphenyl (%)		78	60-150	

Dilution Factor

1

#### Waste Stream Technology, Inc. Herbicides in TCLP Extract 1311/8150

Site: Olin - Drum Phase Date Sampled: 09/26/00 Date Received: 09/27/00

TCLP Extraction Date: 10/02/00

Group Number: 2002-255

Units: mg/L Matrix: TCLP Extract

WST ID: WS71815

Client ID: C - Composite

Extraction Date: 10/03/00 Date Analyzed: 10/04/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
2,4-D	0.02	Not detected		U
2,4,5-TP (Silvex)	0.02	Not detected		U
2,4-DCPAA (%)		129	10- 127	

PCBs in Soil SW-846 8082

Site: Olin - Drum Phase Date Sampled: 09/26/00 Date Received: 09/27/00 Group Number: 2002-255

Units: mg/Kg Matrix: Solid

WST ID: WS71815

Client ID: C - Composite Extraction Date: 10/05/00

Date Analyzed: 10/05/00

Compound	Detection Limit	Result -	QC Limits (%)	Qualifier
arocior 1016	1.50	Not detected		U
aroclor 1221	1.20	Not detected	•	U
aroclor 1232	1.80	Not detected		U
arocior 1242	0.900	Not detected		U
aroclor 1248	0.600	Not detected		U
aroclor 1254	0.300	Not detected		U
arocior 1260	0.300	Not detected		U
Decachlorobiphenyl (%)		99	60-150	
Tetrachioro-m-xylene (%)		84	60-150	

## Waste Stream Technology, Inc. Wet Chemistry Analyses

Site: Olin - Drum Phase Date Sampled: 09/26/00 Date Received: 09/27/00 Group Number: 2002-255

Matrix: Solid

WST ID: WS71815 Client ID C - Composite

Analysis	Method Reference	Detection Limit	Result	Units	Date Analyzed
Ignitability (flash point)	SW-846 1010	NA	>200	°F	10/02/00
	4				

<sup>&</sup>gt; 200 = no flash detected at a temperature up to 200 degrees Fahrenheit.



#### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

Service Agreement on File? XYES	<u>]</u> мо	Profile Number: W	MI CN68/3
	TSCA	Renewal Date:	7 7
A. Waste Generator Information	The state of the s		
		The state of the s	
1. Generator Name: OLIN CA	RPORMTION	2. SIC Code: <u>역연역</u>	
3. Facility Street Address: 5( e)	gme5 37	4. Phone: <u>(ዋንያ ) ሬ ታ</u> ያ	-6121
5. Facility City: WILMINGTON	٠	6. State/Province: 144 14	
7. Zip/Postal Code: 01887		8. Generator USEPA/Federal	1D#: MHO OUT403104
9. County:		10. State/Province ID #:	
11. Customer Name: OLIP と	-RPORMTIEN	12. Customer Phone: (나	23) 336-4511
13. Customer Contact: 57006	Markew	14. Customer Fax: 423-	336-4166
15. Billing Address	_		Same as above
B. Waste Stream Information			
1. Description			
a. Name of Waste: OLG	LIQUID		•
	DRUM EXCHUM	TION	
DRUM # 123.1	· <b>4</b>		
c. Color d. Strong odd	or e. Physical state	e @ 70°F   f. Layers	g. Free liquid range
BCRC'K/ (describe):	1	≝Liquid ⊠Single Layer	
	. —		to 100%
BROWN CHEMI		]Sludge   Multi-layer	
	Other		h. pH: Range
			to 8,49%
i. Liquid Flash Point: □<73°F	5173-99°F □100-139°I	F	☐Not applicable
		ganics, debris, and UHC's) present in any con-	Contration and extends
representa	ative analysis):	Barrener menseral mina meren al bustance as decil mest.	couracon and approx
Constituents	Concentration Range	Constituents	Concentration Range
BENZENE	0-944 PPb	DRUM PARTS/ DEBRUS	0-507
CRESOLS	0-569 PP6	OILY LIQUID	50-1009.
CHREME	6-23 PPM	SEE TELP AWALL	
NEKE	0-11 Ppm	WS 72618	
	AL COMPOSITION MUST	EQUAL OR EXCEED 100%	
k. <u></u> Oxidizer	/rophoric □Ex	plosive	-
٠	•	•	
		ock Sensitive ☐Water Rea ne carcinogens which require OSH/	icuve
notification? (list in Section B.1.)	ins prome contain any of the	ie cardinogens which require USHA	
m. Does the waste represented by	this profile postain distinct		ØYES □NO
n. Does the waste represented by	this profile contain dioxins?	(list in Section B.T.j)	
n. Does the waste represented by	trus profile contain aspesto	5 7	TYES PNO
Door the wester resemble of the	**************************************	friable □non	
o. Does the waste represented by		?	SYYES DNO
	<u>,역 Y</u> ppm		
is the waste subject to the benzi	ene waste operations NESI	HAP?	□YES 図NO
p. Is the waste subject to RCRA Su	ubpart CC controls?		YES MO
It no, does the waste meet the o	rganic LDR Exemption?	*************************************	DEYES NO
If no, does the waste contain <5	00 ppmw volatile organic (\	′O)?	<u>⊠</u> YES □NO
Volatile organic concentration	ppr	nw	
Does the weeks contain any Clar	! Ci !!	A*	
q. Does the waste contain any Clas	ss ror Class II ozone-deple	ting substances?	
r. Does the waste contain debris?	(list in Section B.1.j)		⊠YES □NO
2. Quantity of Waste			
Eştimated Annual Volume	1 CITO	is	acifu)
***************************************		- Ciraida Morania Comet (st	racety)
3. Shipping Information			
a. Packaging:	,		
Bulk Solid; Type/Size: 1 -	110 CALLEN	☐Bulk Liquid; Type/Size:	
MDrum; Type; Size: 1-25 CM	CLON OUEK PAC	Other:	
b. Shipping Frequency: Units	2 Per:	]Month	me COther
c. Is this a U.S. Department of Train	nsportation (USDOT) Hazar	dous Material? (If no skind a and	1) SYES DNO
		for each much my district	Deg: 12.0 [] NU



### GENERATOR'S WASTE PROFILE SHEET PLEASE PRINT IN INK OR TYPE

d	d. Reportable Quantity (lbs.;kgs.):  e. Hazard Class/ID#:				
f.	· · · · · · · · · · · · · · · · · · ·	= NE), 3, UNIRR.	2, PGI,		
g		(USEPA D	018,000		
þ	. Transporter/Transfer Station:				
e G	enerator's Certification (Please check appropriate responses, sign, and date below	3			
######################################	Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2		RZYES □NC		
1.	a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D, F, K, P, U	DOIR	<b>Q2</b>		
	u. 11,700; 1000; 1				
	b. If a characteristic hazardous waste, do underlying hazardous constituents				
	(UHCs) apply? (if yes, list in Section B.1.j)	MYES [NO			
	Composition - B.1.)	MYES DNO	•		
2.	Is this a state hazardous waste?	*****************************	MEYES □NC		
	Identify ALL state nazardous waste codes 17 O ( 3				
3.	is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up?		BYES DNC		
	If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site activity. For state mandated clean-up, provide relevant documentation. MUDEP, 216	e clean-up デームフェニュル マーC	471		
	•				
4.	Does the waste represented by this waste profile sheet contain radioactive material, or is disp	oosal	TYES WINC		
	regulated by the Nuclear Regulatory Commission?		Clies Mile		
5.	Does the waste represented by this waste profile sheet contain concentrations of Polychlorina	ated			
	Biphenyls (PCBs) regulated by 40 CFR 761? (if yes, list in Chemical Composition - B.1.j)	**************************************	□YES MENC		
	a. If yes, were the PCBs imported into the U.S.?	DYES DNO			
6.	Do the waste profile sheet and all attachments contain true and accurate descriptions of the v		•		
	material, and has all relevant information within the possession of the Generator regarding kn	own or	MYES □NC		
	suspected hazards pertaining to the waste been disclosed to the Contractor?	*****************************	MIE2 DIAC		
7.	Will all changes which occur in the character of the waste be identified by the Generator and	disclosed			
	to the Contractor prior to providing the waste to the Contractor?		⊠YES □NO		
□Che	ck here if a Certificate of Destruction or Disposal is required.				
	imple submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivale	ent method   Lauthorize W	M to obtain a		
Any sa sample	imple submitted is representative as defined in 40 CFR 201 - Appendix 1 of by using an equivale from any waste shipment for purposes of recertification. If this certification is made by a broke	er, the undersigned signs a	is authorized		
agent o	of the generator and has confirmed the information contained in this Profile Sheet from informati	ion provided by the genera	itor and additiona		
informa	ation as it has determined to be reasonably necessary. If approved for management, Contracto is for the waste that has been the pharacterized and identified by this approved profile.	r has all the necessary pe	mits and		
	100	<b>A</b> -			
	cation Signature: New Moreon Title:	PRINCIPHE E	NU. Speci		
Name	(Type or Print): STEVE MORROW Company Name: OLIN	CURPLANTION	Date: 11/13		
	西Check if additional information is attached. Indicate the	e number of attached p	ages		
		FOR MAL	JSE ONLY		
1.	M Management's Decision  Management Method □Landfill □Non-hazardous Solidification □Biorem				
''	□Hazardous Stabilization □Other (Specify)				
2.	Proposed Ultimate Management Facility:				
3.	Precautions, Special Handling Procedures, or Limitation on Approval:				
1					
4.	Waste Form 5. Source	6. System Type			
	al Waste Decision	□Approved [ Date:	_Disapproved		
	person's Signature: On Approval Signature (Optional):	Date:			
	at Waste Approvals Person Signature:	Date:			
		_ ·			

302 Grote Street Buffalo, NY 14207 (716) 876-5290

#### Analytical Data Report

Group Number: 2002-275

Site: Olin - Drum Phase

#### Field and Laboratory Information

			Date	Date	
WST ID	Client ID	Matrix	Sampled	Received	Time
WS72604	Cyanide Solids	Solid	10/16/00	10/16/00	11:00
WS72605	Cyanide & Sulfide Solids	Solid	10/16/00	10/16/00	11:00
WS72606	Sulfide	Solid	10/16/00	10/16/00	11:00
WS72607	Flammable Resins / Solids	Solid	10/16/00	10/16/00	11:00
WS72608	+Cu	Solid	10/16/00	10/16/00	11:00
WS72609	Partially/Slightly H2O sol.Resins&Solids	Solid	10/16/00	10/16/00	11:00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	Solid	10/16/00	10/16/00	11:00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	Solid	10/16/00	10/16/00	11:00
WS72613	Oily Liquid	Oil	10/16/00	10/16/00	11:00
WS72614	Mixed Resins & Solids	Solid	10/16/00	10/16/00	11:00
WS72615	Water Sol. Liquid	Aqueous	10/16/00	10/16/00	11:00

#### Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: mg/Kg

WST ID	WST ID Client ID		Result	Date Analyzed	
WS72604	Cyanide Solids	40.0	Not detected	10/19/00	
WS72605	Cyanide & Sulfide Solids	40.0	360	10/19/00	
WS72606	Sulfide	40.0	126	10/19/00	
WS72607	Flammable Resins / Solids	40.0	94.8	10/19/00	
WS72608	+Cu	40.0	48.2	10/20/00	
WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	40.1	10/20/00	
WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00	
WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00	
<b>→</b> WS72613	Oily Liquid	40.0	Not detected	10/20/00	
WS72614	Mixed Resins & Solids	40.0	42.3	10/20/00	

# Waste Stream Technology, Inc. Ignitability (flash point) SW-846 1010

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: \*F

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	NA	98.6	10/23/00
WS72605	Cyanide & Sulfide Solids	NA	113	10/23/00
WS72606	Sulfide	NA	77.0	10/23/00
WS72607	Flammable Resins / Solids	NA	86.0	10/23/00
WS72608	+Cu	NA	82.4	10/23/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	>200	10/23/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA	100	10/23/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA	117	10/23/00

#### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: mg/Kg

WST ID Client ID		Detection Limit	Result	Date Analyzed	
WS72604	Cyanide Solids	40.0	Not detected	10/19/00	
WS72605	Cyanide & Sulfide Solids	40.0	Not detected	10/19/00	
WS72606	Sulfide	40.0	Not detected	10/19/00	
WS72607	Flammable Resins / Solids	40.0	Not detected	10/19/00	
WS72608	+Cu	40.0	Not detected	10/20/00	
WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	Not detected	10/20/00	
WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00	
WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00	
<b>≫</b> WS72613	Oily Liquid	40.0	Not detected	10/20/00	
-WS72614	Mixed Resins & Solids	40.0	Not detected	10/20/00	

#### Waste Stream Technology, Inc. pH in Solid SW-846 9045C

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: pH Units

WST ID	WST ID Client ID		Result	Date Analyzed	
WS72604	Cyanide Solids	NA .	6.24	10/17/00	
WS72605	Cyanide & Sulfide Solids	NA	7.60	10/17/00	
WS72606	Sulfide	NA	7.75	10/17/00	
WS72607	Flammable Resins / Solids	NA	6.11	10/17/00	
WS72608	+Cu	NA	4.00	10/17/00	
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	7.92	10/17/00	
WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA	6.03	10/17/00	
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA	7.18	10/17/00	
▶ WS72613	Oily Liquid	NA	8.49	10/17/00	
WS72614	Mixed Resins & Solids	NA	2.82	10/17/00	

## Waste Stream Technology, Inc. Wet Chemistry Analyses

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

Group Number: 2002-275

Matrix: Oil

WST ID: WS72613 Client ID Oily Liquid

Analysis	Method Reference	Detection Limit	Result	Units	Date Analyzed
Ignitability (flash point)	SW-846 1010	NA	77.0	۰	10/19/00

#### VOCs by Waste Dilution TCLP List SW-846 8260B

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: ug/kg Matrix: Oil

WST ID: WS72613 Client ID: Oily Liquid

Extraction Date: 10/26/00 Date Analyzed: 10/26/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
vinyl chloride	5000	Not detected		U
1,1-dichloroethene	2500	Not detected	·	U
chloroform	2500	Not detected	9	U
2-butanone	50000	Not detected		U
1,2-dichloroethane	2500	Not detected		U
carbon tetrachloride	2500	Not detected		U
trichloroethene	2500	Not detected		U
benzene	2500	944		J
tetrachloroethene	2500	Not detected		U
chlorobenzene	2500	Not detected		U
1,4-dichlorobenzene	2500	Not detected		U
1,2-Dichloroethane-d4 (%)		92	70- 121	
Toluene-d8 (%)		98	81- 117	
Bromofluorobenzene (%)		116	74-121	

**Dilution Factor** 

4

#### 8270 Waste Dilution - TCLP List SW-846 8270

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

Group Number: 2002-275

Units: mg/Kg Matrix: Oil

WST ID: WS72613

Client ID: Oily Liquid Extraction Date: 10/26/00 Date Analyzed: 10/28/00

Compound	Detection Limit	Result	QC Limits (%	Qualifier
pyridine	20	Not detected		U
1,4-dichlorobenzene	20	Not detected		U
total cresols (o,m & p)	60	569		
nitrobenzene	20	Not detected		U
hexachloroethane	20	Not detected		U
hexachlorobutadiene	20	Not detected		U
2,4,6-trichlorophenol	20	Not detected		U
2,4,5-trichlorophenol	20	Not detected		U
2,4-dinitrotoluene	20	Not detected		U
hexachlorobenzene	20	Not detected		U
pentachiorophenoi	100	Not detected		U
2-Fluorophenol (%)		82	25- 121	
Phenol-d6 (%)		70	24-113	
Nitrobenzene-d5 (%)		85	23-120	
2-Fluorobiphenyl (%)		116	30-115	#
2,4,6-Tribromophenol (%)		65	19-122	
Terphenyl-d14 (%)		156	18- 137	#

#### Waste Dilution TCLP Pesticides SW-846 8081

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: µg/Kg Matrix: Oil

WST ID: WS72613 Client ID: Oily Liquid Extraction Date: 10/26/00

Date Analyzed: 10/28/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
gamma-BHC	16	Not detected		U
heptachlor	97	Not detected		U
heptachlor epoxide	42	Not detected		U
endrin	55	Not detected		U
methoxychlor	31	Not detected		U
chlordane	350	Not detected		U
toxaphene	1550	Not detected		U
Tetrachioro-m-xylene (%)		88	60- 150	
Decachlorobiphenyl (%)		71	60-150	

#### Herbicides by Waste Dilution SW-846 8151

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: mg/Kg

Matrix: Oil

WST ID: WS72613

lient ID: Oily Liquid Extraction Date: 10/27/00

Date Analyzed: 10/29/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
2,4-D	1.8	Not detected		U
2,4,5-TP (silvex)	0.8	Not detected	•	U
2,4-DCPAA (%)	•	100	10-127	

#### Waste Stream Technology, Inc. Metals Analysis Result Report

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: mg/Kg Matrix: Oil

WST ID: WS72613

**** 165.	****
Client ID:	Oily Liquid
Digestion Date:	10/19/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	3.40	Not detected	10/19/00	SW-846 6010
Barium by ICP	2.00	Not detected	10/19/00	SW-846 6010
Cadmium by ICP	2.00	Not detected	10/19/00	SW-846 6010
Chromium by ICP	2.00	23.1	10/19/00	SW-846 6010
Copper by ICP	2.00	5.59	10/19/00	SW-846 6010
Lead by ICP	8.20	Not detected	10/19/00	SW-846 6010
Mercury by Cold Vapor	0.014	Not detected	10/20/00	SW-846 7471
Nickel by ICP	2.00	11.3	10/19/00	SW-846 6010
Selenium by ICP	2.80	Not detected	10/19/00	SW-846 6010
Silver by ICP	1.00	Not detected	10/19/00	SW-846 6010
Zinc by ICP	8.00	9.01	10/19/00	SW-846 6010

PCBs in Oil SW-846 8082

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: mg/Kg Matrix: Oil

WST ID: WS72613 Client ID: Oily Liquid Extraction Date: 10/27/00

Date Analyzed: 10/27/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifie
Aroclor 1016	0.5	Not detected		U
Aroclor 1221	0.5	Not detected	•	U
Aroclor 1232	0.5	Not detected		U
Aroclor 1242	0.5	Not detected		U
Aroclor 1248	0.5	Not detected		U
Aroclor 1254	0.5	Not detected		U
Aroclor 1260	0.5	Not detected		U
Decachlorobiphenyl (%)		76	60-150	
Tetrachloro-m-xylene (%)		87	60-150	

#### **METHODOLOGIES**

The specific methodologies employed in obtaining the analytical data reported are indicated on each of the result forms. The method numbers shown refer to the following U.S. Environmental Protection Agency Reference:

Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020, March 1979, Revised 1983, U.S. Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268.

Federal Register, 40 CFR Part 136: Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act. Revised July 1992.

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. Third Edition, Revised December 1996, U.S. EPA SW-846.

Annual Book of ASTM Standards, Volume II. ASTM, 100 Harbor Drive, West Conshohocken, PA 19428-2959.

Standard Methods for the Examination of Water and Wastewater. (20th Edition). American Public Health Association, 1105 18th Street, NW, Washington, D.C. 20036.

#### ORGANIC DATA QUALIFIERS

- U Indicates compound was analyzed for but not detected.
- J Indicates an estimated value. This flag is used to qualify the following: when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed; a compound is detected in the sample but the result is less than the method quantitation limit but greater than the statistically calculated laboratory method detection limit; the result for a compound is estimated due to the analysis of a sample beyond the USEPA defined holding time; the result for a compound is estimated due to a quality control sample result that is outside the laboratory quality control recovery limits.
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as the sample.
- E This flag identifies all compounds whose concentrations exceed the calibration range of the GC/MS instrument of that specific analysis.
- D This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G Matrix spike recovery is greater than the expected upper limit of analytical performance.
- Matrix spike recovery is less than the expected lower limit of analytical performance.
- # \_ Indicates that a surrogate recovery was found to be outside the expected limits of analytical performance.
- \$ Indicates that the surrogate compound was diluted out. The sample had to be diluted to obtain analytical results and a recovery could not be calculated.
- (%) Indicates that the compound is a surrogate and that the value reported for this compound is in percent recovery. The quality control recovery limits are indicated in the detection limit or QC limits column.

#### Case Narrative

The following comments and observations were made regarding the analysis of the composite samples from the Olin Drum Project site for Sevenson Environmental Services, Inc. corresponding to the Waste Stream Technology Inc. sample group number 2002-275 and sample numbers WS72604 through WS72615 which were composited on 10/18/00;

- 1.0 Sample Number WS72612 (Cyanide Liquid)
  - 1.1 Only one Olin Drum Project sample was identified as being a cyanide containing liquid. The volume of liquid received for this sample, designated as Waste Stream Technology sample ID number WS72612 was insufficient to perform the required TCLP analyses. Since additional sample volume could not be obtained, all of the analyses to be performed on WS72612 were canceled.
- 2.0 Sample Number WS72613 (Oily Liquid)
  - 2.1 Sample number WS72613 was an oily liquid that was not amenable to TCLP filtration, Subsequently, waste dilution analyses had to be performed on the sample. The results for sample number WS72613 are, therefore, reported on a weight per unit weight basis (i.e.,  $\mu g/kg$  or mg/kg basis).
- 3.0 Sample Number WS72615 (Water Soluble Liquid)
  - 2.1 Sample number WS72615 was a water soluble liquid that was not amenable to TCLP filtration, Subsequently, the TCLP analyses were performed on the unfiltered sample. As such, the TCLP date was listed as NA on the TCLP result report sheets.

Daniel W. Vou	Date	11/3/00
Daniel W. Vollmer		
QA/QC Officer		



#### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

rvice Agreement on File? 🔀 YI				лмі <b>СN</b> 6875
Hazardous Non-Hazardou			Renewal Date:	
Waste Generator Information				<u> anno anno anno anno anno anno anno ann</u>
Generator Name: GLIA	CORPLKATIO	2. S	C Code: 9999	
	I EXMES ST	4. P	none: <u>(タフォ) 65</u> 2	8-6121
Facility City: WILMI	NCTON		tate/Province: M M	
Zip/Postal Code: _ Ulg ?			enerator USEPA/Federa	110 #: MAOGO140
County:			tate/Province ID #:	
Customer Name: 04/	N CORPORATIO	12. C		128) 336-4511
Customer Contact: 57	TEVE MERROW	14. C	Sustomer Fax: 425	3-336-4166
Billing Address			and the second s	⊠Same as ab
Waste Stream Information  Description  a. Name of Waste: <u>SC/C</u> b. Process Generating Wast	HTLY/PHRTINULE: DROM E	XCHULATCE		= 5 ( M S
DRUM # 94,10	00,127,44,61	, 62, 72		
Color de Steat	na odos do Dhi	ysical state @ 70°F	If Imvor	g. Free liquid rang
c. Color d. Stror		ysical state @ 70°F Solid ☐ Liquid	f. Layers	g. Free liquid rang
17/1/2-14/		Gas Sludge	Multi-layer	10 /
RED/LHITE CHE		Other	- Charamasa et	h. pH: Range
	U`			to '
Constituents	Concentration	Range II Constit	uents	Concentration Pa
Constituents FLUSH POINT	Concentration	DRU	N PHETS DEBRIS	Concentration Ra
FLUSH POINT CRESOLS	117 °F U-8 PP	h Re-	N PHKES DEBRIS	50-1007
FLUSH POINT CRETOLS CHOMIUM	0-8 PP 0-28 PP	h Re-	n pures/debris sins = Telp Apul	50-1007
FLUSH POINT CRESOLS	0-8 PP 0-28 PP 0-28 PP	h Re-	n PHETS/DEBRIS SINS & TCLP APHL 5 72611	50-1007
FLUSH POINT CRETOLS CHOMIUM BARLUM	0-8 11 0-28 11 0-28 11 TOTAL COMPOSITION	h Re-  M SE-  M SE-  M SE-  M W SE-  M	n phres/debris sins f Tolp phal 5 7 2 6 11 drexceed 100%	50 - 50 %. 50 - 100 7
FLUSH POINT  CRETOLS  CHOMIUM  BHRIUM  k.   Oxidizer	0-28 11 0-28 11 0-23 P TOTAL COMPOSITION	h  Re-  M  SE  PM  W  ON MUST EQUAL (	NUKES/DEBRIS SINS E TOLP MAHL 5 7 2 6 1 ( DREXCEED 100% □Radioact	0-507. 50-1007 255
FLUSH POINT  CRETOLS  CHOMIUM  BHRIUM  k. Didizer  Carcinogen	U-9 PP O-28 PP O-28 PP U-93 P TOTAL COMPOSITION	h Re-  M SE  ON MUST EQUAL  Explosive  Shock Sens	NUKES   DEBRIS  S(NS  E TOUP MANA  S 7 2 6 ( )  DR EXCEED 100%  □Radioact  Sitive □Water Re	0 - 50 % 50 - 100 7 24575 ive
FLUSH POINT  CRETOLS  CHOMIUM  BHRIUM  k. Didizer  Carcinogen  I. Does the waste represent	O-28 11 O-28 11 O-28 11 O-28 11 O-28 11 O-28 11 O-13 P  TOTAL COMPOSITION  [Pyrophoric   Infectious   Infecti	PM Resident of the carcing in any of the Carcing in the carcing in	PARES DEBRIS  TOLP APAC  TOLP APAC  TOLP APAC  TOLP APAC  Radioact  Water Repairs which require OSF	0 - 50 7. 50 - 100 7. 4515  ive eactive
FLUSH POINT  CRETOLS  CHOMIUM  BHRUM  K. Didizer  Carcinogen  I. Does the waste represent notification? (list in Section)	O-28 11 O-28 1	PM Resident of the carcing in any of the carcing in	PARES DEBRIS  TOLP APAC  TOLP APAC  TOLP APAC  TOLP APAC  Radioact  Gradioact  Gradioact  Water Repaire OSE	
FLUSH POINT  CRETOLS  CHOMIUM  BARIUM  K. Dividizer  Carcinogen  I. Does the waste represent notification? (list in Section)  m. Does the waste represent	O-28 // O-28 // O-28 // O-28 // TOTAL COMPOSITION    Pyrophoric   Infectious   ted by this profile contain B.1.j)   ted by this profile contain by this profile contain by this profile contain by this profile contain by this profile contain by this profile contain by this profile contain by this profile contain by this profile contain by this profile contain by this profile contain by this profile contain by this profile contain by this profile contain by this profile contain by the	M REXPLOSIVE  Explosive  Shock Sensin any of the carcing in dioxins? (list in S	PARES DES RIS  TOLP APAC  TOLP APAC  TOLP APAC  Radioact  Water Re  Description B.1.j)	ive eactive
FLUSH POINT  CRETOLS  CHOMIUM  BARIUM  K. Doxidizer  Carcinogen  I. Does the waste represent notification? (list in Section) m. Does the waste represent notification waste represent notification waste represent notification.	O-28/11 O-28/1	M Remarks Rema	PARES DESERS TOUR APAC TOUR APAC TOUR APAC TOUR APAC Radioact Sitive	ive eactive HA
K. Oxidizer Carcinogen I. Does the waste represent notification? (list in Section Does the waste represent notification).	O-28 // O-28 // O-28 // O-28 // TOTAL COMPOSITION    Pyrophoric     Infectious   ted by this profile contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the c	DRUM  RE  M SE  M SE  SHO  Shock Sensin any of the carcing in dioxins? (list in Sin asbestos?	PARTS DETS RISSINS TOLP PAPAL TOL	ive eactive HA
ELUSH POINT  CRETOLS  CHOMIUM  BHRUM  Carcinogen  L. Does the waste represent notification? (list in Section). Does the waste represent notification waste represent notification waste represent notification.	O-28 // O-28 // O-28 // O-28 // TOTAL COMPOSITION    Pyrophoric     Infectious   ted by this profile contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the contained by the c	PROPERTY OF THE PROPERTY OF TH	PARTS DETS RISSINS TOLP PAPAL TOL	ive eactive HA
K. Oxidizer Carcinogen I. Does the waste represent notification? (list in Section) Does the waste represent if yes	O-28 // O-28 // O-28 // O-28 // O-28 // D-28 // TOTAL COMPOSITION    Pyrophoric     Infectious     ted by this profile contained by this profile con	DRUM  Re-  M SE  PM W  ONMUST EQUAL  Explosive  Shock Sensin any of the carcinum  in dioxins? (list in Sin asbestos?	PARES DEBRIS  TOLP PAPAL  TOLP	ive eactive HA
K. Oxidizer Carcinogen I. Does the waste represent notification? (list in Section) Does the waste represent if yes	O-28 11 O-28 1	DRUM Re- M R	PARES DEBRIS  TOUR PARES  TOUR PARES  Radioact  Sitive	ive eactive HA
K. Didizer Carcinogen I. Does the waste represent notification? (list in Section.) Does the waste represent If yes	O-28/11 O-28/1	DRUM RESTANDING MUST EQUAL  Explosive Shock Sensin any of the carcing in dioxins? (list in Sin asbestos?	TOUP MANACE TOUP MANACE TOUP MANACE TOUP MANACE TOUP MANACE TOUP MANACE Radioact Sitive	ive eactive HA   YES   YES   YES   YES   YES
K. Dividizer Carcinogen  I. Does the waste represent notification? (list in Section)  m. Does the waste represent if yes.  O. Does the waste represent if yes, concentration is the waste subject to the p. Is the waste subject to RC if no, does the waste mee if no, does the waste cont	O-28/11 O-28/1	DRUM  RESPLOSIVE  Shock Sensin any of the carcing in dioxins? (list in Sin asbestos?	TOUP MANACE TOUP MANACE TOUP MANACE TOUP MANACE TOUP MANACE TOUP MANACE Radioact Sitive	ive eactive HA   YES   YES   YES   YES   YES
K. Didizer Carcinogen I. Does the waste represent notification? (list in Section.) Does the waste represent If yes	O-28/11 O-28/1	DRUM  RESPLOSIVE  Shock Sensin any of the carcing in dioxins? (list in Sin asbestos?	TOUP MANACE TOUP MANACE TOUP MANACE TOUP MANACE TOUP MANACE TOUP MANACE Radioact Sitive	ive eactive HA   YES   YES   YES   YES   YES
K. Oxidizer Carcinogen  I. Does the waste represent notification? (list in Section.)  Does the waste represent if yes	O-28/11 O-28/1	DRUM RESTANDING MUST EQUAL  Explosive Shock Sensin any of the carcing in dioxins? (list in Sin asbestos?	PARES DES RIS  TOUR PARES TOUR PARES TOUR PARES TOUR PARES TOUR PARES PRESCRED 100%    Radioact   Water Re   Ogens which require OSH   ection B.1.j)	ive eactive HA   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES
K. Dividizer Carcinogen  I. Does the waste represent notification? (list in Section.)  Does the waste represent if yes.  O. Does the waste represent if yes, concentration is the waste subject to the p. Is the waste subject to RC if no, does the waste mee if no, does the waste continuous the waste continuous the waste continuous the waste continuous the waste continuous the waste continuous the waste continuous the waste continuous the waste continuous the waste contain and the continuous the waste contain and the continuous t	O-28/11 O-28/1	DRUM  RESTANDING    Second   S	TOUP MANACES TOUP MANACES TOUP MANACES TOUP MANACES TOUP MANACES TOUP MANACES Radioact Water Report of the Company of the Comp	ive eactive HA   YES   Y
K. Oxidizer Carcinogen  I. Does the waste represent notification? (list in Section.)  Does the waste represent If yes	O-28/11 O-28/1	DRUM  RESTANDING    Second   S	TOUP MANACES TOUP MANACES TOUP MANACES TOUP MANACES TOUP MANACES TOUP MANACES Radioact Water Report of the Company of the Comp	ive eactive HA   YES   Y
K. Oxidizer Carcinogen  I. Does the waste represent notification? (list in Section.)  Does the waste represent If yes	O-28/11 O-28/1	DRUM  Ref  Ref  SEM  DN MUST EQUAL  Explosive  Shock Sensin any of the carcinum in dioxins? (list in Sin asbestos?  In benzene?  In benzene?  In corganic (VO)?  In ppmw  It cone-depleting subsections.	Tour MANS Tour M	ive eactive HA   YES   Y
K. Oxidizer Carcinogen  I. Does the waste represent notification? (list in Section.)  Does the waste represent If yes	O-28/11 O-28/1	DRUM  Ref  Ref  SEM  DN MUST EQUAL  Explosive  Shock Sensin any of the carcinum in dioxins? (list in Sin asbestos?  In benzene?  In benzene?  In corganic (VO)?  In ppmw  It cone-depleting subsections.	TOUP MANACES TOUP MANACES TOUP MANACES TOUP MANACES TOUP MANACES TOUP MANACES Radioact Water Report of the Company of the Comp	ive eactive HA   YES   Y
K. Oxidizer Carcinogen  I. Does the waste represent notification? (list in Section.)  Does the waste represent If yes	O-28/11 O-28/1	DRUM  Ref  Ref  SEM  DN MUST EQUAL  Explosive  Shock Sensin any of the carcinum in dioxins? (list in Sin asbestos?  In benzene?  In benzene?  In corganic (VO)?  In ppmw  It cone-depleting subsections.	Tour MANS Tour M	ive eactive HA   YES   Y
K. Oxidizer Carcinogen  I. Does the waste represent notification? (list in Section.)  Does the waste represent If yes.  Does the waste represent If yes, concentration is the waste subject to the p. Is the waste subject to RC if no, does the waste meet if no, does the waste cont Volatile organic concentration.  Quantity of Waste Estimated Annual Volume	O-28/11 O-28/1	DRUM  Ref  Ref  SEM  DN MUST EQUAL  Explosive  Shock Sensin any of the carcinum in dioxins? (list in Sin asbestos?  In benzene?  In benzene?  In corganic (VO)?  In ppmw  It cone-depleting subsections.	Tour MANS Tour M	ive eactive HA   YES   Y
K. Oxidizer Carcinogen  I. Does the waste represent notification? (list in Section Does the waste represent If yes	O-28/11 O-28/1	DRUM  RESPIOSIVE  Shock Sensin any of the carcine in dioxins? (list in Sin asbestos?	Tour MANS Tour M	ive eactive HA   YES   Y
K. Oxidizer Carcinogen  I. Does the waste represent notification? (list in Section Does the waste represent If yes	O-28 // O-28 // O-28 // O-28 // O-28 // O-28 // DO-28 //	DRUM   Re-   M	Tour Armostation B.1.j)	ive eactive HA   YES   Y



### GENERATOR'S WASTE PROFILE SHEET PLEASE PRINT IN INK OR TYPE

ď	d. Reportable Quantity (lbs.;kgs.): e. Hazard Class/ID #:	4.1	
f.	f. USDOT Shipping Name: FLAMMUBLE SOLIOS, TOXLE, OKCHALE, N.O.	SCCHOP	4/cm) 4.
-	g. Personal Protective Equipment Requirements: しゃっとって	<u>, pc.tt (</u>	USEPA D
h	h. Transporter/Transfer Station:		
C. Ge	enerator's Certification (Please check appropriate responses, sign, and date below,)		
1.	is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2		ZYES Livi
••	a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D, F, K, P, U)	<b>೧೧</b> ೬	<b>M</b>
			····
	b. If a characteristic hazardous wasle, do underlying hazardous constituents	SEVES ENG	
	(UHCs) apply? (if yes, list in Section B.1.j)	MYES _NO	
	Composition - B.1.)	EXYES DNO	)
2.	to this or atake hamandare constant		
۷.	is this a state hazardous waste?		STYES CILU
-	to the second of	***************************************	
3.	is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up?	***************************************	¥ZYES □NU
	activity. For state mandated clean-up, provide relevant documentation. MR 06 P, 216 5	170 to 3.	- 6471
			• •
4.	Does the waste represented by this waste profile sheet contain radioactive material, or is disposal regulated by the Nuclear Regulatory Commission?		TYES MO
,	regulated by the Houseas (regulatory Commission)		TIES BRAO
5.	Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated		
	Biphenyls (PCBs) regulated by 40 CFR 761? (if yes, list in Chemical Composition - B.1.j)		□YES 541
	a. If yes, were the PODS imported into the O.S. F	□YES □NO	
6.	Do the waste profile sheet and all attachments contain true and accurate descriptions of the waste		
	material, and has all relevant information within the possession of the Generator regarding known or		
	suspected hazards pertaining to the waste been disclosed to the Contractor?	*****	KAYES □NO
7.	Will all changes which occur in the character of the waste be identified by the Generator and disclosed		_
<b>10////////////////////////////////////</b>	to the Contractor prior to providing the waste to the Contractor?		MÉYES □N
□ Che	eck here if a Certificate of Destruction or Disposal is required.		
Anv sar	imple submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent metho	d i authorize l	AMA to obtain a
sample	from any waste shipment for purposes of recertification. If this certification is made by a broker, the unc	dersigned signs	as authorized
agent of	of the generator and has confirmed the information contained in this Profile Sheet from information provides	ed by the gene	rator and additional
licenses	ation as it has determined to be reasonably necessary. If approved for management, Contractor has all the soft of the waste that has been the facterized and identified by this approved profile.	he necessary p	emits and
	Cation Signature: Title: PRIA  (Type or Print): STEVE MORROW Company Name: OVAN CONTA		
IASTILE (		16Rure.~	Date: 11/19/2
	☐Check if additional information is attached. Indicate the number	r or attached ;	pages <u>/ 4</u>
D. WN	W Management's Decision .	EOS WW	USE ONLY
1.	Management Method   Landfill   Non-hazardous Solidification   Bioremediation	□Incinera	
	☐Hazardous Stabilization ☐Other (Specify)		
2.	Proposed Ultimate Management Facility:		
3.	Precautions, Special Handling Procedures, or Limitation on Approval:		
4.	Waste Form 5. Source 6. Sv.	clam Tuzz	
		stem Type	CDiegocraved
	person's Signature: Date		□Disapproved
	on Approval Signature (Optional):		
	al Waste Approvals Person Signature: Date	***************************************	

302 Grote Street Buffalo, NY 14207 (716) 876-5290

#### Analytical Data Report

Group Number: 2002-275

Site: Olin - Drum Phase

#### Field and Laboratory Information

			Date	Date	
WSTID	Client ID	Matrix	Sampled	Received	Time
WS72604	Cyanide Solids	Solid	10/16/00	10/16/00	11:00
WS72605	Cyanide & Sulfide Solids	Solid	10/16/00	10/16/00	11:00
WS72606	Sulfide	Solid	10/16/00	10/16/00	11:00
WS72607	Flammable Resins / Solids	Solid	10/16/00	10/16/00	11:00
. WS72608	+Cu	Solid	10/16/00	10/16/00	11:00
WS72609	Partially/Slightly H2O sol.Resins&Solids	Solid	10/16/00	10/16/00	11:00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	Solid	10/16/00	10/16/00	11:00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	Solid	10/16/00	10/16/00	11:00
WS72613	Oily Liquid	Oil	10/16/00	10/16/00	11:00
WS72614	Mixed Resins & Solids	Solid	10/16/00	10/16/00	11:00
WS72615	Water Sol. Liquid	Aqueous	10/16/00	10/16/00	11:00

#### Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

Group Number: 2002-275

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	40.0	Not detected	10/19/00
WS72605	Cyanide & Sulfide Solids	40.0	360	10/19/00
WS72606	Sulfide	40.0	126	10/19/00
WS72607	Flammable Resins / Solids	40.0	94.8	10/19/00
WS72608	+Cu	40.0	48.2	10/20/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	40.1	10/20/00
WS72610	Slightly/Partially Hexane sol. Resins&Sol	40.0	Not detected	10/20/00
<b>-&gt;</b> WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00
WS72613	Oily Liquid	40.0	Not detected	10/20/00
WS72614	Mixed Resins & Solids	40.0	42.3	10/20/00

#### Waste Stream Technology, Inc. Ignitability (flash point) SW-846 1010

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: \* F

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	NA .	98.6	10/23/00
WS72605	Cyanide & Sulfide Solids	NA	113	10/23/00
WS72606	Sulfide	NA	77.0	10/23/00
WS72607	Flammable Resins / Solids	NA	86.0	10/23/00
WS72608	+Cu	NA	82.4	10/23/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	>200	10/23/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA	100	10/23/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA	117	10/23/00

#### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: mg/Kg

	WST ID	Client ID	Detection Limit	Result	Date Analyzed
	WS72604	Cyanide Solids	40.0	Not detected	10/19/00
	WS72605	Cyanide & Sulfide Solids	40.0	Not detected	10/19/00
	WS72606	Sulfide	40.0	Not detected	10/19/00
	WS72607	Flammable Resins / Solids	40.0	Not detected	10/19/00
	WS72608	+Cu	40.0	Not detected	10/20/00
	WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	Not detected	10/20/00
	WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00
-	WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00
	WS72613	Oily Liquid	40.0	Not detected	10/20/00
	WS72614	Mixed Resins & Solids	40.0	Not detected	10/20/ <b>0</b> 0

#### Waste Stream Technology, Inc. pH in Solid SW-846 9045C

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: pH Units

WSTID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	NA	6.24	10/17/00
WS72605	Cyanide & Sulfide Solids	NA	7.60	10/17/00
WS72606	Sulfide	NA	7.75	10/17/00
WS72607	Flammable Resins / Solids	NA	6.11	10/17/00
W <b>S</b> 72608	+Cu	NA	4.00	10/17/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA:	7.92	10/17/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA	6.03	10/17/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA	7.18	10/17/00
WS72613	Oily Liquid	NA	8.49	10/17/00
WS72614	Mixed Resins & Solids	NA	2.82	10/17/00

## TCLP Volatile Organics Analysis 1311/8260B

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: µg/L

Matrix: TCLP Extract

WST ID: WS72611

Client ID: Slightly/Partially Hexane&H2O sol.Resins

TCLP Date: 10/26/00 Date Analyzed: 10/31/00

100 50	Not detected		· · · · · · · · · · · · · · · · · · ·
EΛ			U
JU	Not detected		U
50	Not detected		U
1000	Not detected		U
50	Not detected		U
50	Not detected		U
50	Not detected		U
50	Not detected		U
50	Not detected		U
50	Not detected		U
50	Not detected		U
	95	70-121	
	98	81-117	
	87	74- 121	
	1000 50 50 50 50 50	1000 Not detected 50 Not detected 50 Not detected 50 Not detected 50 Not detected 50 Not detected 50 Not detected 50 Not detected 50 Not detected 50 Not detected 95 98	1000       Not detected         50       Not detected         95       70-121         98       81-117

#### 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/18/00

Group Number: 2002-275

Units: µg/L

Matrix: TCLP Extract

WST ID: WS72611

Client ID: Slightly/Partially Hexane&H2O sol.Resins

Extraction Date: 10/26/00 Date Analyzed: 10/27/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
pyridine	. 10	Not detected		U
1,4-dichlorobenzene	10	Not detected		U
Total cresols(o,m & p)	30	8		J
nitrobenzene	10	Not detected		U
hexachloroethane	10	Not detected		U
hexachlorobutadiene	10	Not detected	,	U
2,4,6-trichlorophenol	10	Not detected		U
2,4,5-trichlorophenol	10	Not detected		U
2,4-dinitrotoluene	10	Not detected		U
hexachlorobenzene	10	Not detected		U
pentachlorophenol	50	Not detected		U
2-Fluorophenol (%)		48	21-100	
Phenol-d6 (%)		29	10-94	
Nitrobenzene-d5 (%)		94	35-114	
2-Fluorobiphenyl (%)		103	43- 116	
2,4,6-Tribromophenol (%)		181	10-123	#
Terphenyl-d14 (%)		205	33-141	#

**Dilution Factor** 

4

#### **TCLP Pesticide Analysis** 1311/8081

Site: Olin - Drum Phase Date Sampled: 10/16/00 Group Number: 2002-275

Units: µg/L

Date Received: 10/16/00

Matrix: TCLP Extract

TCLP Extraction Date: 10/18/00

WST ID: WS72611

lient ID: Slightly/Partially Hexane&H2O sol.Resins

Extraction Date: 10/27/00 Date Analyzed: 10/28/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chlordane	0.350	Not detected		U
endrin	0.055	Not detected		Ų
gamma-BHC (Lindane)	0.016	Not detected		U
heptachlor	0.097	Not detected		U
heptachlor epoxide	0.042	Not detected		U
methoxychlor	0.031	Not detected		U
toxaphene	1.540	Not detected	•	U
Tetrachloro-m-xylene (%)		73	60- 150	
Decachlorobiphenyl (%)		73	60-150	

### Herbicides in TCLP Extract 1311/8150

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/18/00

Group Number: 2002-275

Units: mg/L

Matrix: TCLP Extract

WST ID: WS72611

lient ID: Slightly/Partially Hexane&H2O sol.Resins

Extraction Date: 10/26/00 Date Analyzed: 10/29/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
2,4-D	0.02	Not detected	-	U
2,4,5-TP (Silvex)	0.02	Not detected	•	U
2,4-DCPAA (%)		62	10-127	

Dilution Factor

4

## Waste Stream Technology, Inc. TCLP Metals Analysis Result Report

Site: Olin - Drum Phase Date Sampled: 10/16/00

Group Number: 2002-275

Units: mg/L

Matrix: TCLP Extrac

TCLP Extraction Date: 10/18/00

Date Received: 10/16/00

WST ID: WS72611

Client ID: Slightly/Partially Hexane&H2O sol.Resins

Digestion Date: 10/24/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	0.045	0.090	10/25/00	SW-846 6010
Barium by ICP	0.025	92.5	10/25/00	SW-846 6010
Cadmium by ICP	0.025	28.1	10/25/00	SW-846 6010
Chromium by ICP	0.025	Not detected	10/25/00	SW-846 6010
Copper by ICP	0.045	0.163	10/25/00	SW-846 6010
Lead by ICP	0.075	Not detected	10/25/00	SW-846 6010
Mercury by Cold Vapor	0.001	Not detected	10/23/00	SW-846 7470
Nickel by ICP	0.025	0.034	10/25/00	SW-846 6010
Selenium by ICP	0.095	Not detected	10/25/00	SW-846 6010
Silver by ICP	0.025	Not detected	10/25/00	SW-846 6010
Zinc by ICP	0.065	9.30	10/25/00	SW-846 6010

PCBs in Soil SW-846 8082

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: mg/Kg Matrix: Solid

WST ID: WS72611

Client ID: Slightly/Partially Hexane&H2O sol.Resins

Extraction Date: 10/27/00 Date Analyzed: 10/28/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
arocior 1016	0.750	Not detected		Ū
aroclor 1221	0.600	Not detected	,	U
aroclor 1232	0.900	Not detected		U
aroclor 1242	0.450	Not detected		U
aroclor 1248	0.300	Not detected		U
aroclor 1254	0.150	Not detected		U
aroclor 1260	0.150	Not detected		. U
Decachlorobiphenyl (%)		89	60-150	
Tetrachloro-m-xylene (%)		94	60-150	
Dilution Factor 15			· · · · · · · · · · · · · · · · · ·	

#### **METHODOLOGIES**

The specific methodologies employed in obtaining the analytical data reported are indicated on each of the result forms. The method numbers shown refer to the following U.S. Environmental Protection Agency Reference:

Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020, March 1979, Revised 1983, U.S. Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268.

Federal Register, 40 CFR Part 136: Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act. Revised July 1992.

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. Third Edition, Revised December 1996, U.S. EPA SW-846.

Annual Book of ASTM Standards, Volume II. ASTM, 100 Harbor Drive, West Conshohocken, PA 19428-2959.

Standard Methods for the Examination of Water and Wastewater. (20th Edition). American Public Health Association, 1105 18th Street, NW, Washington, D.C. 20036.

#### ORGANIC DATA QUALIFIERS

- U Indicates compound was analyzed for but not detected.
- J Indicates an estimated value. This flag is used to qualify the following: when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed; a compound is detected in the sample but the result is less than the method quantitation limit but greater than the statistically calculated laboratory method detection limit; the result for a compound is estimated due to the analysis of a sample beyond the USEPA defined holding time; the result for a compound is estimated due to a quality control sample result that is outside the laboratory quality control recovery limits.
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as the sample.
- E This flag identifies all compounds whose concentrations exceed the calibration range of the GC/MS instrument of that specific analysis.
- D This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G Matrix spike recovery is greater than the expected upper limit of analytical performance.
- L Matrix spike recovery is less than the expected lower limit of analytical performance.
- # \_ Indicates that a surrogate recovery was found to be outside the expected limits of analytical performance.
- \$ Indicates that the surrogate compound was diluted out. The sample had to be diluted to obtain analytical results and a recovery could not be calculated.
- (%) Indicates that the compound is a surrogate and that the value reported for this compound is in percent recovery. The quality control recovery limits are indicated in the detection limit or QC limits column.

#### Case Narrative

The following comments and observations were made regarding the analysis of the composite samples from the Olin Drum Project site for Sevenson Environmental Services, Inc. corresponding to the Waste Stream Technology Inc. sample group number 2002-275 and sample numbers WS72604 through WS72615 which were composited on 10/18/00;

- 1.0 Sample Number WS72612 (Cyanide Liquid)
  - 1.1 Only one Olin Drum Project sample was identified as being a cyanide containing liquid. The volume of liquid received for this sample, designated as Waste Stream Technology sample ID number WS72612 was insufficient to perform the required TCLP analyses. Since additional sample volume could not be obtained, all of the analyses to be performed on WS72612 were canceled.
- 2.0 Sample Number WS72613 (Oily Liquid)
  - 2.1 Sample number WS72613 was an oily liquid that was not amenable to TCLP filtration, Subsequently, waste dilution analyses had to be performed on the sample. The results for sample number WS72613 are, therefore, reported on a weight per unit weight basis (i.e.,  $\mu g/kg$  or mg/kg basis).
- 3.0 Sample Number WS72615 (Water Soluble Liquid)
  - 2.1 Sample number WS72615 was a water soluble liquid that was not amenable to TCLP filtration, Subsequently, the TCLP analyses were performed on the unfiltered sample. As such, the TCLP date was listed as NA on the TCLP result report sheets.

Daniel W. Vollmer
QA/QC Officer

Date 1/3/00



#### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

	A STATE OF THE STA	PLEASE PRINT	IN INK OK ITP	E Profile Number V	мі <u>CN</u> 6876
Ser	vice Agreement on File? \(\)YES \(\)Non-Hazardous \(\)	io Isca		Renewal Date:	
	Waste Generator Information				a second
1.		w R PURATION		Code: 9999	
3.	Facility Street Address: 51 EM			one: (978) 65	9-6121
5.	Facility City: WILMINGTO	2		te/Province: MA	
7.	Zip/Postal Code: 01887		************		10 #: MHD 00140310
9.	County:			ate/Province ID #:	3
11.		RPERATION			23) 336-451( - 336-4/66
13.		Merker	14. Cu	siomer Pax. 423	ASame as above
	Billing Address Waste Stream Information				
1.	Description	<u>, en la companya de </u>	<del></del>		
	a. Name of Waste: 5616476	SIPARTIMLLY	HEXMA	E JOL, RESIA	5 × 50L
		HUM EXCHU	MTCUN		
	DRUM # 108,117.	119,30,58	<u>64, 65,</u>	.67,120,112,	121, 169,59,71
f	c. Color d. Strong odor	e. Physical s	tate @ 70°F	f. Layers	g. Free liquid range
		Solid Nysical s	Liquid	∭Single Layer	to %
}	BLACK/BROWN (describe):	1 =_	Sludge	☐Multi-layer	
ł	WRITE / KED ZACMICS	Other	L 9		h. pH: Range
ŀ				]	to 603 %
L			nor	)-199°F	덨Not applicable
	i. Liquid Flash Point: □<73°F     i. Chemical Composition (List all cons	□73-99°F □100-13			
		utuents (including nalogenalet ve analysis):	o organics, debns,	, and one s) present in any cor	ICETIC AUCH BITO SOCIAL
		•			
1	Constituents	Concentration Range			Concentration Range
ļ	FLUSH PUINT	100 °F		PARTS/DEBRIS	50-100%
- 1	CRESUL	0-14 PP6 0-65 PPM	RESI	<u>~~</u>	35-73-71
ŀ	CHDMIUM	0-65 PPM			
L	<b>B</b> ieiz	AL COMPOSITION MU	ST EQUAL O	R EXCEED 100%	
	k. Oxidizer Dyr	ophoric [	Explosive	∏Radioacti	ve
			Shock Sensi		
	I. Does the waste represented by the				łA
	notification? (list in Section B.1.j)				□YES MO
	m. Does the waste represented by the				
	n. Does the waste represented by the				
	If yes	********************	*****************	[friable []no	n-friable
	o. Does the waste represented by the	·	ene?		YES MO
	If yes, concentration	ppm	==::450		ENC ENC
	is the waste subject to the benze	ne waste operations N	ESHAP?		YES NO
	p. Is the waste subject to RCRA Su	opart CC controls?		**************	YES ZINO
	If no, does the waste meet the or If no, does the waste contain <50				
	Volatile organic concentration			************************	BYES DNO
	<u> </u>				
	q. Does the waste contain any Clas				
	r. Does the waste contain debris? (	list in Section B.1.j)			
2.	Quantity of Waste				
	Estimated Annual Volume	_14	Tons TYar	ds ⊠Drums □Other (:	specify)
3.	Shinning Information	,	. —		
J.	Shipping Information  a. Packaging:				¥
	Bulk Solid; Type/Size:3-110	<u></u>	۲	Bulk Liquid; Type/Size	•
	Drum; Type; Size: 185 CM	CLEN OUCKPAC		Other:	
	b. Shipping Frequency: Units	1 4 Pe		Quarter Year Mone	time Other
	c. Is this a U.S. Department of Tran				



# GENERATOR'S WASTE PROFILE SHEET PLEASE PRINT IN INK OR TYPE

C	I. Reportable Quantity (lbs.;kgs.):	e. Hazard Class/ID #	4 7 '	<b>.</b> = .
f.				
9		f_G_7	T (USEPH	D006)
ħ	. Transporter/Transfer Station:			
C. Ge	enerator's Certification (Please check appropriate response	s, sign, and date below.)	**************************************	
<b>******</b>			on and a sign of the first of t	
1.	Is this a USEPA hazardous waste (40 CFR Part 261)? If the answ a. If yes, identify ALL USEPA listed and characteristic waste co	de numbers (D, F, K, P, U)	D006	ØYES □NU
	b. If a characteristic hazardous waste, do underlying hazardous	conctituente		•
	(UHCs) apply? (if yes, list in Section B.1.j)		WIYES IZNO	
	c. Does this waste contain debris? (if yes, list size and type in C	hemical	<u> </u>	
	Composition - B.1.)	*********************************	₩YES □NO	,
2.	is this a state hazardous waste?		·	FAYES □NU
	identify ALL state hazardous waste codes	0006	***************************************	بالل مواقع
				•
3.	Is the waste from a CERCLA (40 CFR 300, Appendix B) or state ma	and start at a mark the		
J,	If yes, attach Record of Decision (ROD), 104/106 or 122 order or co	unt order that governs site clea	n-un	<b>⊠</b> YES □N∪
	activity. For state mandated clean-up, provide relevant documentat	ion. MHDEP 21E	5172 H 3-	0471
	Done the west sensested by this waste made a best senses and			
4.	Does the waste represented by this waste profile sheet contain radii regulated by the Nuclear Regulatory Commission?			□YES MO
			***************************************	۵،20 هـ،۰٥
<b>5</b> .	Does the waste represented by this waste profile sheet contain cond	entrations of Polychlorinated		
	Biphenyls (PCBs) regulated by 40 CFR 761? (if yes, list in Chemica a. If yes, were the PCBs imported into the U.S.?			TYES EN
	a. It yes, were the roots inputed into the old filliaminiminiminimini	.4PP+9444+44444akanananoocnioraabanocongccyaq	□YES □NO	
6.	Do the waste profile sheet and all attachments contain true and acc	urate descriptions of the waste	<b>.</b>	
	material, and has all relevant information within the possession of the	e Generator regarding known	or	
	suspected hazards pertaining to the waste been disclosed to the Co	-Unacroit	********************	KZYES □NO
7.	Will all changes which occur in the character of the waste be identified	ed by the Generator and discid	sed	
Similar construction	to the Contractor prior to providing the waste to the Contractor?	***************************************		ESEYES □N
□Che	ck here if a Certificate of Destruction or Disposal is required.			· · · · · · · · · · · · · · · · · · ·
	· ·	. formation of the second		
sample	nple submitted is representative as defined in 40 CFR 261 - Appendix from any waste shipment for purposes of recertification. If this certific	: I or by using an equivalent mi	ethod. I authorize W	M to obtain a
agent o	f the generator and has confirmed the information contained in this Pr	ofile Sheet from information pr	ovided by the genera	tor and additional
informa	tion as it has determined to be reasonably necessary. If approved for	management, Contractor has	all the necessary pe	rmits and
icenses	s for the waste that has been obstracterized and identified by this appr	oved profile. PK	INCIPAC	
Certific	cation Signature: Level Worker	ر سے :Title	-UIR.MELT	ec 3pecia
Name	(Type or Print): <u> </u>	y Name: OUN COR	PERMTION	Date: ///7/
	SCheck if additional information is	attached. Indicate the nur	nber of attached p	ages [
	Management's Decision			JSE ONLY
1.	Management Method  Landfill  Non-hazardous Solid		ion Incinerat	ion
2.		(Specify)		
3.	Proposed Ultimate Management Facility:	A	ONINCOCKHI MIRITANI PORILI I IN DEPORTURA I IN INC. I I I I I I I I I I I I I I I I I I I	
₹.	Precautions, Special Handling Procedures, or Limitation on	wbbloasi:		
4.	Waste Form 5. Source	6.	System Type	
Specia	Waste Decision	V.		Disapproved
Salesp	erson's Signature:		Date:	
Division	n Approval Signature (Optional):		Date:	
Specia	l Waste Approvals Person Signature:		Date:	***************************************

302 Grote Street Buffalo, NY 14207 (716) 876-5290

# Analytical Data Report

Group Number: 2002-275

Site: Olin - Drum Phase

# Field and Laboratory Information

			Date	Date	
WST ID	Client ID	Matrix	Sampled	Received	Time
WS72604	Cyanide Solids	Solid	10/16/00	10/16/00	11:00
WS72605	Cyanide & Sulfide Solids	Solid	10/16/00	10/16/00	11:00
WS72606	Sulfide	Solid	10/16/00	10/16/00	11:00
WS72607	Flammable Resins / Solids	Solid	10/16/00	10/16/00	11:00
WS72608	+Cu	Solid	10/16/00	10/16/00	11:00
WS72609	Partially/Slightly H2O sol.Resins&Solids	Solid	10/16/00	10/16/00	11:00
₹VS72610	Slightly/Partially Hexane sol.Resins&Sol	Solid	10/16/00	10/16/00	11:00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	Solid	10/16/00	10/16/00	11:00
WS72613	Oily Liquid	Oil	10/16/00	10/16/00	11:00
WS72614	Mixed Resins & Solids	Solid	10/16/00	10/16/00	11:00
WS72615	Water Sol. Liquid	Aqueous	10/16/00	10/16/00	11:00

## Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275 Matrix: Solid

Matrix: Solid Units: mg/Kg

WSTID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	40.0	Not detected	10/19/00
WS72605	Cyanide & Sulfide Solids	40.0	360	10/19/00
WS72606	Sulfide	40.0	126	10/19/00
WS72607	Flammable Resins / Solids	40.0	94.8	10/19/00
WS72608	+Cu	40.0	48.2	10/20/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	40.1	10/20/00
<b>S</b> WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00
WS72613	Oily Liquid	40.0	Not detected	10/20/00
WS72614	Mixed Resins & Solids	40.0	42.3	10/20/00

## Waste Stream Technology, Inc. Ignitability (flash point) SW-846 1010

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: ° F

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	NA	98.6	10/23/00
WS72605	Cyanide & Sulfide Solids	NA	113	10/23/00
WS72606	Sulfide	NA	77.0	10/23/00
WS72607	Flammable Resins / Solids	NA	86.0	10/23/00
WS72608	+Cu	NA	82.4	10/23/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	>200	10/23/00
▶WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA	100	10/23/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA ·	117	10/23/00

### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	40.0	Not detected	10/19/00
WS72605	Cyanide & Sulfide Solids	40.0	Not detected	10/19/00
WS72606	Sulfide	40.0	Not detected	10/19/00
WS72607	Flammable Resins / Solids	40.0	Not detected	10/19/00
WS72608	+Cu	40.0	Not detected	10/20/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	Not detected	10/20/00
<b>≫</b> WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00
WS72613	Oily Liquid	40.0	Not detected	10/20/00
WS72614	Mixed Resins & Solids	40.0	Not detected	10/20/00

## Waste Stream Technology, Inc. pH in Solid SW-846 9045C

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

Group Number: 2002-275

Matrix: Solid Units: pH Units

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	NA	6.24	10/17/00
WS72605	Cyanide & Sulfide Solids	NA	7.60	10/17/00
WS72606	Sulfide	NA	7.75	10/17/00
WS72607	Flammable Resins / Solids	NA	6.11	10/17/00
WS72608	+Cu	NA	4.00	10/17/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	7.92	10/17/00
▶ WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA	6.03	10/17/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA	7.18	10/17/00
WS72613	Oily Liquid	NA	8.49	10/17/00
WS72614	Mixed Resins & Solids	NA	2.82	10/17/00

# TCLP Volatile Organics Analysis 1311/8260B

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: µg/L

Matrix: TCLP Extract

WST ID: WS72610

Client ID: Slightly/Partially Hexane sol.Resins&Sol

TCLP Date: 10/27/00 Date Analyzed: 10/31/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifie
vinyl chloride	100	Not detected	-	U
1,1-dichloroethene	50	Not detected		U
chloroform	50	Not detected		U
2-butanone	1000	Not detected		U
1,2-dichloroethane	50	Not detected		U
carbon tetrachloride	50	Not detected	•	U
trichloroethene	50	Not detected		U
benzene	50	Not detected		U
etrachloroethene	50	Not detected		U
chlorobenzene	50	Not detected		U
1,4-dichlorobenzene	50	Not detected		U
1,2-Dichloroethane-d4 (%)		100	70-121	
Toluene-d8 (%)		101	81-117	
Bromofluorobenzene (%)		92	74-121	

# 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/18/00

Group Number: 2002-275

Units: µg/L

Matrix: TCLP Extract

WST ID: WS72610

Client ID: Slightly/Partially Hexane sol.Resins&Sol

Extraction Date: 10/26/00 Date Analyzed: 10/27/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
pyridine	10	Not detected	• ,	U
1,4-dichlorobenzene	10	Not detected		U
Total cresols(o,m & p)	30	14		J
nitrobenzene	10	Not detected		U
hexachloroethane	10	Not detected		U
hexachlorobutadiene	10	Not detected		U
2,4,6-trichlorophenol	10	Not detected		U
2,4,5-trichlorophenol	10	Not detected		U
2,4-dinitrotoluene	10	Not detected		U
hexachlorobenzene	10	Not detected		U
pentachlorophenol	50	Not detected		U
2-Fluorophenol (%)		35	21-100	
Phenol-d6 (%)		35	10-94	
Nitrobenzene-d5 (%)		67	35-114	
2-Fluorobiphenyl (%)	•	79	43-116	
2,4,6-Tribromophenol (%)		108	10-123	
Terphenyl-d14 (%)		170	33-141	#

**Dllution Factor** 

1

#### TCLP Pesticide Analysis 1311/8081

Site: Olin - Drum Phase Date Sampled: 10/16/00 Group Number: 2002-275

Units: µg/L

Date Received: 10/16/00

Matrix: TCLP Extract

TCLP Extraction Date: 10/18/00

WST ID: WS72610

lient ID: Slightly/Partially Hexane sol.Resins&Sol

Extraction Date: 10/26/00 Date Analyzed: 10/28/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chiordane	0.350	Not detected	·	U
endrin	0.055	Not detected		U
gamma-BHC (Lindane)	0.016	Not detected		U
heptachlor	0.097	Not detected		U
heptachlor epoxide	0.042	Not detected		U
methoxychlor	0.031	Not detected		U
toxaphene	1.540	Not detected	·	U
Tetrachloro-m-xylene (%)		76	60- 150	
Decachlorobiphenyl (%)		68	60- 150	

# Herbicides in TCLP Extract 1311/8150

Site: Olin - Drum Phase Date Sampled: 10/16/00

Date Received: 10/16/00

TCLP Extraction Date: 10/18/00

Group Number: 2002-275

Units: mg/L

Matrix: TCLP Extract

WST ID: WS72610

lient ID: Slightly/Partially Hexane sol.Resins&Sol

Extraction Date: 10/26/00 Date Analyzed: 10/29/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
2,4-D	0.02	Not detected		U
2,4,5-TP (Silvex)	0.02	Not detected		U
2,4-DCPAA (%)		106	10- 127	

**Dilution Factor** 

4

# Waste Stream Technology, inc. **TCLP Metals Analysis Result Report**

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: mg/L

Matrix: TCLP Extrac

TCLP Extraction Date: 10/18/00

WST ID: WS72610

Client ID: Slightly/Partially Hexane sol.Resins&Sol Digestion Date: 10/24/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	0.045	Not detected	10/25/00	SW-846 6010
Barium by ICP	0.025	2.15	10/25/00	SW-846 6010
Cadmium by ICP	0.025	65.1	10/25/00	SW-846 6010
Chromium by ICP	0.025	Not detected	10/25/00	SW-846 6010
Copper by ICP	0.045	0.202	10/25/00	SW-846 6010
Lead by ICP	0.075	Not detected	10/25/00	SW-846 6010
Mercury by Cold Vapor	0.001	Not detected	10/23/00	SW-846 7470
Nickel by ICP	0.025	Not detected	10/25/00	SW-846 6010
Selenium by ICP	0.095	Not detected	10/25/00	SW-846 6010
Silver by ICP	0.025	Not detected	10/25/00	SW-846 6010
Zinc by ICP	0.065	2.37	10/25/00	SW-846 6010

PCBs in Soil SW-846 8082

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: mg/Kg Matrix: Solid

WST ID: WS72610

Client ID: Slightly/Partially Hexane sol.Resins&Sol

Extraction Date: 10/27/00 Date Analyzed: 10/27/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
aroclor 1016	0.750	Not detected	The second secon	Ū
aroclor 1221	0.600	Not detected		U
aroclor 1232	0.900	Not detected		U
aroclor 1242	0.450	Not detected		U
arocior 1248	0.300	Not detected		U
aroclor 1254	0.150	Not detected		U
arocior 1260	0.150	Not detected		U
Decachlorobiphenyl (%)		91	60- 150	
Tetrachloro-m-xylene (%)		103	60-150	

#### **METHODOLOGIES**

The specific methodologies employed in obtaining the analytical data reported are indicated on each of the result forms. The method numbers shown refer to the following U.S. Environmental Protection Agency Reference:

Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020, March 1979, Revised 1983, U.S. Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268.

Federal Register, 40 CFR Part 136: Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act. Revised July 1992.

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. Third Edition, Revised December 1996, U.S. EPA SW-846.

Arinual Book of ASTM Standards, Volume II. ASTM, 100 Harbor Drive, West Conshohocken, PA 19428-2959.

Standard Methods for the Examination of Water and Wastewater. (20th Edition). American Public Health Association, 1105 18th Street, NW, Washington, D.C. 20036.

#### ORGANIC DATA QUALIFIERS

- U Indicates compound was analyzed for but not detected.
- J Indicates an estimated value. This flag is used to qualify the following: when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed; a compound is detected in the sample but the result is less than the method quantitation limit but greater than the statistically calculated laboratory method detection limit; the result for a compound is estimated due to the analysis of a sample beyond the USEPA defined holding time; the result for a compound is estimated due to a quality control sample result that is outside the laboratory quality control recovery limits.
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as the sample.
- E This flag identifies all compounds whose concentrations exceed the calibration range of the GC/MS instrument of that specific analysis.
- D This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- **G** Matrix spike recovery is greater than the expected upper limit of analytical performance.
- L Matrix spike recovery is less than the expected lower limit of analytical performance.
- # \_ Indicates that a surrogate recovery was found to be outside the expected limits of analytical performance.
- \$ Indicates that the surrogate compound was diluted out. The sample had to be diluted to obtain analytical results and a recovery could not be calculated.
- (%) Indicates that the compound is a surrogate and that the value reported for this compound is in percent recovery. The quality control recovery limits are indicated in the detection limit or QC limits column.

#### Case Narrative

The following comments and observations were made regarding the analysis of the composite samples from the Olin Drum Project site for Sevenson Environmental Services, Inc. corresponding to the Waste Stream Technology Inc. sample group number 2002-275 and sample numbers WS72604 through WS72615 which were composited on 10/18/00;

- 1.0 Sample Number WS72612 (Cyanide Liquid)
  - 1.1 Only one Olin Drum Project sample was identified as being a cyanide containing liquid. The volume of liquid received for this sample, designated as Waste Stream Technology sample ID number WS72612 was insufficient to perform the required TCLP analyses. Since additional sample volume could not be obtained, all of the analyses to be performed on WS72612 were canceled.
- 2.0 Sample Number WS72613 (Oily Liquid)
  - 2.1 Sample number WS72613 was an oily liquid that was not amenable to TCLP filtration, Subsequently, waste dilution analyses had to be performed on the sample. The results for sample number WS72613 are, therefore, reported on a weight per unit weight basis (i.e.,  $\mu g/kg$  or mg/kg basis).
- 3.0 Sample Number WS72615 (Water Soluble Liquid)
  - 2.1 Sample number WS72615 was a water soluble liquid that was not amenable to TCLP filtration, Subsequently, the TCLP analyses were performed on the unfiltered sample. As such, the TCLP date was listed as NA on the TCLP result report sheets.

Daniel W. Vollmer
QA/QC Officer

Date 1/3/00

Drum Removal RAM, Status Report No. 2 and Completion Statement Olin Corporation July 12, 2001

DISPOSAL TESTING RESULTS – OVERPACK DRUMS, NON-HAZ	ARDOUS	
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#### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

Service Agreement on File? <a href="#">YE</a> <a href="#">Hazardous</a> <a href="#">Non-Hazardous</a> <a href="#">A. Waste Generator Information</a>	\ <del>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</del>	Profile Number: W Renewal Date:	м <b>СК</b> 5108
1. Generator Name: OLLM 3. Facility Street Address: 5/ 5. Facility City: WILM7. 7. Zip/Postal Code: OLSS 9. County: 11. Customer Name: OLLM 13. Customer Contact: 57E 15. Billing Address B. Waste Stream Information 1. Description a. Name of Waste: US b. Process Generating Waste  DRUM # 21, 151  C. Color d. Strong	EXMES ST RCTUN MM  7  E-KPOLATION UE MORROW  71813 COMP  142  10dor   e. Physical ste	2. SIC Code: T???  4. Phone: (97%) 65%-  6. State/Province: M H  8. Generator USEPA/Federal  10. State/Province ID #:  12. Customer Phone: (42  14. Customer Fax: 427-	- 6/2 ( ID #: 1/4 / 6 0 0 0 ( 4 0 3 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0
i. Liquid Flash Point:     Cu change   Cu	Gas □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	□Liquid ☑Single Layer □Sludge □Multi-layer □F □140-199°F □≥ 200°F organics, debris, and UHC's] present in any con-	h. pH: Range to 8.30%
Constituents  REXCTIVE SULITION  CRESOL  CHROMIUM  FLASH POINT	0-16 ffm 0-0.098 ffi 7200 ff	Constituents  DRUM PHATS DERRIS  SOCIOS  SEE RITHCHED TOUP  RMACYSUS LUS 71813  FEQUAL OR EXCEED 100%	Concentration Range
Carcinogen  I. Does the waste represente notification? (list in Section m. Does the waste represente n. Does the waste represente If yes	Infectious  d by this profile contain any of B.1.j)  d by this profile contain dioxins d by this profile contain asbest  d by this profile contain benzer  ppm  penzene waste operations NES A Subpart CC controls?	ixplosive	Ctive   A
Quantity of Waste     Estimated Annual Volume		ons ∐Yards ⊠Drums ∐Other (s	
b. Shipping Frequency: Units		☐Bulk Liquid; Type/Size: ☐Other: ☐Month ☐Quarter ☐Year ☑One ardous Material? (If no, skip d, e, and	e time Other



#### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

d		
f.		
g		
h	. Transporter/Transfer Station:	
el ce	enerator's Certification (Please check appropriate responses, sign, and date below.)	· · · · · · · · · · · · · · · · · · ·
D9000000000000000000000000000000000000		
1.	Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2	□YES ☑NO
	a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D, F, K, P, U)	• · · · · · · · · · · · · · · · · · · ·
	b. If a characteristic hazardous waste, do underlying hazardous constituents	
	(UHCs) apply? (if yes, list in Section B.1.])	e e e
	c. Does this waste contain debris? (If yes, list size and type in Chemical	*
	Composition - B.1.)	
2.	Is this a state hazardous waste?	ENTER EASIE
۷.	identify ALL state hazardous waste codes	□YES MO
		٠
3.	is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up?	4ZÍYES □NO
	If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site clean-up activity. For state mandated clean-up, provide relevant documentation. 14 17 000 216 5100 4 03-0	U 91
•	activity. For state mandated deam-up, provide resevant documentation. MIN DEP 218 3118 4 5300	7.5.
4.	Does the waste represented by this waste profile sheet contein radioactive material, or is disposal	
	regulated by the Nuclear Regulatory Commission?	□YES KINO
_	Manual the control of the state	•
5.	Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated  Biphenyis (PCBs) regulated by 40 CFR 761? (if yes, list in Chemical Composition - B.1.j)	CIVEO CANO
	a. If yes, were the PCBs imported into the U.S.?	□YES MU
6.	Do the waste profile sheet and all attachments contain true and accurate descriptions of the waste	
	material, and has all relevant information within the possession of the Generator regarding known or	
	suspected hazards pertaining to the waste been disclosed to the Contractor?	MYES DNO
7.	Will all changes which occur in the character of the waste be identified by the Generator and disclosed	
	to the Contractor prior to providing the waste to the Contractor?	EXES DNC
Char		
Поняс	ck here if a Certificate of Destruction or Disposal is required.	
Any san	nple submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. I authorize WI	VII to obtain a
sample	from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs a	s authorized
agent of	f the generator and has confirmed the information contained in this Profile Sheet from information provided by the genera tion as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary per	tor and additional
licenses	s for the waste that has been characterized and identified by this approved profite.	une sué
	1/7	
	ation Signature: New Manne Title: PRINCIPAL ENL	
Name (	(Type or Print): STEUE MARROW Company Name: OUN CORPURATION D	ate: [[[[
	Check if additional information is attached. Indicate the number of attached page	iges (t
T30 1000		
		MI USE ONLY,
1.	Management Method   Landfill   Non-hazardous Solidification   Bioremediation   Incinerat	ion
g ·	Hazardous Stabilization Other (Specify)	<u> </u>
2.	Proposed Ultimate Management Facility:	
3.	Precautions, Special Handling Procedures, or Limitation on Approval:	
A	Waste Form 5. Source 6. System Type	
4. Special	o. Cyclott typo	
		]Disapproved
-		
		<u> </u>
- Properties	I Waste Approvals Person Signature; Date:	

# COMPOSITE FORM

Composite ID: A US 71813

<del>y</del>	
CLIENT ID	Grams
021	167
15	167
142	173
V * 11 =	
JECCOM .	- VERY SO AT FOREST
in the same of	- KEMPORE NE-11,

## Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Received: 09/27/00

Group Number: 2002-255

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Date Sampled	Detection Limit	Result	Date Analyzed
── <b>&gt;</b> WS71813	A - Composite	09/26/00	40.0	40.9	09/29/00
WS71814	B - Composite	09/26/00	40.0	61.3	09/29/00
WS71815	C - Composite	09/26/00	40.0	121	09/29/00

### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Received: 09/27/00

Group Number: 2002-255

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Date Sampled	Detection Limit	Result	Date Analyzed
→ WS71813	A - Composite	09/26/00	40.0 -	Not detected	09/29/00
WS71814	B - Composite	09/26/00	40.0	Not detected	09/29/00
W <b>S</b> 71815	C - Composite	09/26/00	40.0	Not detected	09/29/00

### Waste Stream Technology, Inc. pH in Solid SW-846 9045C

Site: Olin - Drum Phase Date Received: 09/27/00

Group Number: 2002-255

Matrix: Solid
Units: pH Units

WST ID	Client ID	Date Sampled	Detection Limit	Resuit	Date Analyzed
→>WS71813	A - Composite	09/26/00	NA _	8.30	10/02/00
WS71814	B - Composite	09/26/00	NA	6.53	10/02/00
WS71815	C - Composite	09/26/00	NA	8.43	10/02/00

## Waste Stream Technology, Inc. **TCLP Volatile Organics Analysis**

1311/8260B

Site: Olin - Drum Phase Date Sampled: 09/26/00

Date Received: 09/27/00

Group Number: 2002-255

Units: µg/L

Matrix: TCLP Extract

WST ID: WS71813 Client ID: A - Composite TCLP Date: 10/04/00

Date Analyzed: 10/05/00

Compound	Detection Limit	Result	- QC Limits (%)	Qualifier
vinyl chloride	100	Not detected		Ú.
1,1-dichloroethene	50	Not detected	·	U
chloroform	50 -	Not detected	e e	U
2-butanone	1000	Not detected	•	U
1,2-dichloroethane	50	Not detected		U
carbon tetrachloride	50	Not detected		U
trichloroethene	50	Not detected		U
benzene	50	Not detected		U
tetrachloroethene	50	Not detected		U
chlorobenzene	50	Not detected	,	U
1,4-dichlorobenzene	50	Not detected		U
1,2-Dichloroethane-d4 (%)	•	87	70-121	•
Foluene-d8 (%)		88	81-117	
Bromofluorobenzene (%)		90	74-121	

# Waste Stream Technology, Inc. 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 09/26/00 Date Received: 09/27/00

elved: 09/2//00

TCLP Extraction Date: 10/02/00

Group Number: 2002-255

Units: µg/L

Matrix: TCLP Extra

WST ID: WS71813 Client ID: A - Composite

Extraction Date: 10/05/00
Date Analyzed: 10/06/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
pyridine	10	Not detected		Ü
1,4-dichlorobenzene	10 .	Not detected	r.	U
Total cresols(o,m & p)	30	15.2		J
nitrobenzene	10	Not detected		U .
hexachloroethane	10	Not detected		U
hexachlorobutadiene	10	Not detected		U
2,4,6-trichlorophenol	10	Not detected		U
2,4,5-trichlorophenol	10	Not detected		U
2,4-dinitrotoluene	10	Not detected		U
hexachlorobenzene	10	Not detected		U
pentachlorophenol	50	Not detected		U .
2-Fluorophenol (%)		21	21-100	
Phenol-d6 (%)		26	10-94	
Nitrobenzene-d5 (%)		86	35-114	
2-Fluorobiphenyl (%)		67	43-116	
2,4,6-Tribromophenol (%)		11 ,	10-123	
Terphenyl-d14 (%)		452	33-141	

Dilution Factor

1

# Waste Stream Technology, Inc. TCLP Metals Analysis Result Report

Site: Olin - Drum Phase Date Sampled: 09/26/00 Date Received: 09/27/00 Group Number: 2002-255

Units: mg/L

Matrix: TCLP Extract

TCLP Extraction Date: 10/02/00

WST ID: WS71813 Client ID: A - Composite Digestion Date: 10/03/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	0.045	Not detected	10/04/00	SW-846 6010
Barium by ICP	0.025	Not detected	10/04/00	SW-846 6010
Cadmium by ICP	0.025	Not detected	10/04/00	SW-846 6010
Chromium by ICP	0.025	0.098	10/04/00	SW-846 6010
Copper by ICP	0.045	Not detected	10/04/00	SW-846 6010
Lead by ICP	0.075	0.094	10/04/00	SW-846 6010
Mercury by Cold Vapor	0.001	Not detected	10/03/00	SW-846 7470
Nickel by ICP	0.025	Not detected	10/04/00	SW-846 6010
Selenium by ICP	0.095	Not detected	10/04/00	SW-846 6010
Silver by ICP	0.025	Not detected	10/04/00	SW-846 6010
Zinc by ICP	0.065	0.396	10/04/00	SW-846 6010

TCLP Pesticide Analysis
1311/8081

Site: Olin - Drum Phase Date Sampled: 09/26/00 Date Received: 09/27/00

TCLP Extraction Date: 10/02/00

Group Number: 2002-255

Units: µg/L

Matrix: TCLP Extra

WST ID: WS71813

Client ID: A - Composite

Extraction Date: 10/05/00 Date Analyzed: 10/05/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chlordane	0.350	Not detected		U
endrin	0.055	Not detected		U
gamma-BHC (Lindane)	0.016	Not detected		U
heptachlor	0.097	Not detected		U
heptachlor epoxide	0.042	Not detected		U
methoxychlor	0.031	Not detected	•	U
toxaphene	1.540	Not detected		U
Tetrachioro-m-xylene (%)		79	60-150	
Decachlorobiphenyl (%)		49	60-150	#

# Waste Stream Technology, Inc. Herbicides in TCLP Extract

1311/8150

Site: Olin - Drum Phase Date Sampled: 09/26/00 Date Received: 09/27/00

TCLP Extraction Date: 10/02/00

Group Number: 2002-255

Units: mg/L

Matrix: TCLP Extract

WST ID: WS71813

Client ID: A - Composite

Extraction Date: 10/03/00

Date Analyzed: 10/04/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
2,4-D	0.02	Not detected		U
2,4,5-TP (Silvex)	0.02	Not detected	ı	U
2,4-DCPAA (%)		88	10-127	

PCBs in Soil SW-846 8082

Site: Olin - Drum Phase Date Sampled: 09/26/00 Date Received: 09/27/00

Group Number: 2002-255

Units: mg/Kg Matrix: Solid

WST ID: WS71813 Client ID: A - Composite

Extraction Date: 10/05/00 Date Analyzed: 10/05/00

Compound	Detection Limit	Result .	QC Limits (%)	Qualifier
aroclor 1016	1.50	Not detected		U
aroclor 1221	1.20	Not detected		U
aroclor 1232	· 1.80	Not detected	•	U
aroclor 1242	0.900	Not detected		U
aroclor 1248	0.600	Not detected		U
aroclor 1254	0.300	Not detected		U
aroclor 1260	0.300	Not detected		U
Decachlorobiphenyl (%)		106	60-150	
Tetrachloro-m-xylene (%)	•	103	60-150	

# Waste Stream Technology, Inc. Wet Chemistry Analyses

Site: Olin - Drum Phase Date Sampled: 09/26/00 Date Received: 09/27/00 Group Number: 2002-255

Matrix: Solid

WST ID: WS71813 Client ID A - Composite

Analysis	Method Reference	Detection Limit	Result	Units	Date Analyzed
Ignitability (flash point)	SW-846 1010	NA	>200	° F	10/02/00

<sup>&</sup>gt; 200 = no flash detected at a temperature up to 200 degrees Fahrenheit.



#### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

	to the second second	]NO ]TSCA	Profile Number: Wi Renewal Date:	MI CK 2103
1. 3. 5. 7. 9. 11. 13.	Generator Name: CLIN C Facility Street Address: 51 E7 Facility City: LILMING T Zip/Postal Code: O1887 County: Customer Name: CLIN C. Customer Contact: 57 EUS Billing Address Waste Stream Information Description a. Name of Waste: LS 71 b. Process Generating Waste:	RPLANTEN MARROW 814 COMPAGITE ONUM EXCHUNTIO	2. SIC Code: 9999 4. Phone: (978) C58- 6. State/Province: M.M. 8. Generator USEPA/Federal I 10. State/Province ID #: 12. Customer Phone: (42) 14. Customer Fax: 429	
	BRUMMITHN (describe): CHEMIC		]Liquid -54Single Layer  Sludge	to % h. pH: Range to € 5 3 %
	i. Liquid Flash Point: □<73°F j. Chemical Composition (List all cor representa	☐73-99°F ☐100-139°F nstituents [including halogenated orgative analysis):	☐140-199°F ☐≥ 200°F anics, debris, and UHC's] present in any cond	⊠Not applicable entration and submit
	Constituents REMOTION SULFINE	Concentration Range	Constituents  DRUM PARTS/DETSRIS	Concentration Range の - 5 0 %
	21KC	0-0.83 P/M	506103	50-1007.
	FLUSH POINT	> 2 04 9 5	SES ATTHERED TELP	
		AL COMPOSITION MUST	FMALYSIS WS 71814 EQUAL OR EXCEED 100%	
	Carcinogen Int  I. Does the waste represented by notification? (list in Section B.1.)  m. Does the waste represented by n. Does the waste represented by	fectious Shot this profile contain any of the short this profile contain dioxins? This profile contain asbestos	plosive	ctive \ YES MO 
	o. Does the waste represented by If yes, concentration	this profile contain benzene'	?	TAES NO
	p. Is the waste subject to RCRA Si	ubpart CC controls?	IAP?	YES NO
	q. Does the waste contain any Cla r. Does the waste contain debris?	ss I or Class II ozone-deplet (list in Section B.1.j)	ing substances?	ZYES NO
2.	Quantity of Waste Estimated Annual Volume	<u>4</u>	s <u></u> Yards <b>™</b> Drums	pecify)
3.	Shipping Information  a. Packaging:  Bulk Solid; Type/Size:		☐Bulk Liquid; Type/Size:	
	Drum; Type; Size: Y - 85		er Other:	***************************************
	<ul> <li>b. Shipping Frequency: Units</li> <li>c. Is this a U.S. Department of Trai</li> </ul>	<b>Y</b> Per: ☐ nsportation (USDOT) Hazar	]Month	time
	•			



#### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

d.	Reportable Quantity (lbs.; kgs.): e. Hazard Class/ID #:			
f.	USDOT Shipping Name: NON KERULHTED SOLIDS			
g.				
h.	Transporter/Transfer Station:			
C. Ge	nerator's Certification (Please check appropriate responses, sign, and date below.) 🗓 👛 🔭		•	
1.	Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2	************	□YES	MO
. ••	a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D, F, K, P, U)			ήm
	b. If a characteristic hazardous waste, do underlying hazardous constituents  (UHCs) apply? (If yes, list in Section B.1.j)	בי ריאורו		
	c. Does this waste contain debris? (if yes, list size and type in Chemical	ES DNO		
	Composition - B.1.)	ES []NO		
		. —		
2.	is this a state hazardous wasta?	*********	☐YES	MO
	Identify ALL state hazardous waste codes			
3.	is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up?		[5#YES	□NO
	If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site clean-up	4 4 A L	F mm. A	
1	activity. For state mandated clean-up, provide relevant documentation. WHDEP 215 5176	03-04	,71	
4.	Does the waste represented by this waste profile sheet contain radioactive material, or is disposal			
**	regulated by the Nuclear Regulatory Commission?	******	□YES	MNO
			<del></del>	_
5.	Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated	w ·		~~!^
	Biphenyls (PCBs) regulated by 40 CFR 761? (if yes, list in Chemical Composition - B.1.j)	ES _NO	☐YES	DEMO
	8. If yes, wate the robs imported into the o.o. (	:3 Uio	,	
6.	Do the waste profile sheet and all attachments contain true and accurate descriptions of the waste			
	material, and has all relevant information within the possession of the Generator regarding known or			_
	suspected hazards pertaining to the waste been disclosed to the Contractor?	*******	<b>EXYES</b>	□NO
7.	Will all changes which occur in the character of the waste be identified by the Generator and disclosed	V 46.7		
1.	to the Contractor prior to providing the waste to the Contractor?		YES	MNO
	ck here if a Certificate of Destruction or Disposal is required.			
Any san	nple submitted la representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. I a	uthorize WMI	to obtain	<b>a</b>
sample	from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersig	ned signs as a	authorize	d
agent of	the generator and has confirmed the information contained in this Profile Sheet from information provided by tion as it has determined to be reasonably necessary. If approved for management, Contractor has all the ne	the generato	randado	litional
	ion as it has determined to be reasonably necessary. It approved for management, Contractor has all the ne I for the waste that has been characterized and identified by this approved profile.	cessary perm	its and	
	1# 141			
	ation Signature: New Manner Title: Principal			
Name (	(Type or Print): STEUS MORROW Company Name: OLIN CORPORM		e: 11/	16/20
	Check if additional information is attached. Indicate the number of a	ittached pag	es <u>t</u>	<u>(                                     </u>
	Il Management's Decision	FOR WIV		NLY
1.		]incineratio	n	
	Hazardous Stabilization Other (Specify)			
•				*******
2.	Proposed Ultimate Management Facility:			
2. 3.				
1	Proposed Ultimate Management Facility:			
1	Proposed Ultimate Management Facility: Precautions, Special Handling Procedures, or Limitation on Approval:			
3. 4.	Proposed Ultimate Management Facility: Precautions, Special Handling Procedures, or Limitation on Approvai:  Waste Form 5. Source 6. System			
3. 4. Specia	Proposed Ultimate Management Facility: Precautions, Special Handling Procedures, or Limitation on Approval:  Waste Form 5. Source 6. System  Waste Decision		Disappro	ved
3. 4. Specia Salesp	Proposed Ultimate Management Facility: Precautions, Special Handling Procedures, or Limitation on Approval:  Waste Form 5. Source 6. System Waste Decision		Disappro	ved
4. Specia Salesp Division	Proposed Ultimate Management Facility: Precautions, Special Handling Procedures, or Limitation on Approval:  Waste Form 5. Source 6. System  Waste Decision		Disappro	ved

# COMPOSITE FORM

Composite ID: B W571814

CLIENT ID	Grams	7
023	125	1
	126	1
	125	1
177	126	1
		4
	501a	{
	<u> </u>	
		!
		1
,	,	
	,	
BEN/TEN		
SEMI-CHUNK	JEM CRIMAL	ME
		•

## Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Received: 09/27/00

Group Number: 2002-255

Matrix: Solid Units: mg/Kg

WSTID	Client ID	Date Sampled	Detection Limit	Result	Date Analyzed
WS71813	A - Composite	09/26/00	40.0	40.9	09/29/00
→ WS71814	B - Composite	09/26/00	40.0	<b>6</b> 1.3	09/29/00
WS71815	C - Composite	09/26/00	40.0	. 121	09/29/00

## Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Received: 09/27/00 Group Number: 2002-255

Matrix: Solid

Units:	mg/Kg
--------	-------

WSTID	Client ID .	Date Sampled	Detection Limit	Result	Date Analyzed
WS71813	A - Composite	09/26/00	40.0	Not detected	09/29/00
→WS71814	B - Composite	09/26/00	40.0	Not detected	09/29/00
WS71815	C - Composite	09/26/00	40.0	Not detected	09/29/00

# Waste Stream Technology, Inc. pH in Solid SW-846 9045C

Site: Olin - Drum Phase Date Received: 09/27/00

Group Number: 2002-255

Matrix: Solid
Units: pH Units

WST ID	Client ID	Date Sampled	Detection Limit	Result	Date Analyzed
WS71813	A - Composite	09/26/00	NA .	8.30	10/02/00
→ WS71814	B - Composite	09/26/00	NA	6.53	10/02/00
WS71815	C - Composite	<b>0</b> 9/26/00	NA	8.43	10/02/00

#### Waste Stream Technology, Inc. TCLP Volatile Organics Analysis 1311/8260B

Site: Olin - Drum Phase Date Sampled: 09/26/00 Date Received: 09/27/00

Group Number: 2002-255

Units: µg/L Matrix: TCLP Extra-

WST ID: WS71814 Client ID: B - Composite TCLP Date: 10/04/00

Date Analyzed: 10/05/00

Compound	Detection Limit	Result -	QC Limits (%)	Qualifier
vinyl chloride	100	Not detected		U
1,1-dichloroethene	50	Not detected		U
chloroform	50	Not detected		U
2-butanone	1000	Not detected		U
1,2-dichloroethane	50	Not detected		U
carbon tetrachloride	50	Not detected		U
trichloroethene	50	Not detected		U
benzene	50	Not detected		U
tetrachloroethene	50	Not detected		U
chlorobenzene	50	Not detected		U
1,4-dichlorobenzene	50	Not detected		U
1,2-Dichloroethane-d4 (%)		89	70- 121	•
Toluene-d8 (%)		88	81-117	
Bromofluorobenzene (%)	•	91	74-121	

#### Waste Stream Technology, Inc. 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 09/26/00 Date Received: 09/27/00

TCLP Extraction Date: 10/02/00

Group Number: 2002-255

Units: µg/L

Matrix: TCLP Extract

WST ID: WS71814

Client ID: B - Composite

Extraction Date: 10/05/00 Date Analyzed: 10/06/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
pyridine	10	Not detected		U
1,4-dichlorobenzene	10	Not detected		U
Total cresols(o,m & p)	30	Not detected		U
nitrobenzene	10	Not detected		U
hexachloroethane	10	Not detected		U
hexachlorobutadiene	10	Not detected		U
2,4,6-trichlorophenol	10	Not detected		U
2,4,5-trichlorophenol	10	Not detected		U
2,4-dinitrotoluene	10	Not detected		U
hexachlorobenzene	10	Not detected		U
pentachlorophenol	50	Not detected		U
2-Fluorophenol (%)		40	21-100	
Phenol-d6 (%)		27	10-94	
Nitrobenzene-d5 (%)		91	35-114	
2-Fluorobìphenyl (%)		91	43-116	
2,4,6-Tribromophenal (%)		114	· 10-123	
Terphenyl-d14 (%)		92	33-141	

Dilution Factor

1

# Waste Stream Technology, Inc. TCLP Metals Analysis Result Report

Site: Olin - Drum Phase Date Sampled: 09/26/00 Date Received: 09/27/00

Group Number: 2002-255

Units: mg/L

Matrix: TCLP Extract

TCLP Extraction Date: 10/02/00

WST ID: WS71814 Client ID: B - Composite Digestion Date: 10/03/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	0.045	Not detected	10/04/00	SW-846 6010
Barium by ICP	0.025	Not detected	10/04/00	SW-846 6010
Cadmium by ICP	0.025	Not detected	10/04/00	SW-846 6010
Chromium by ICP	0.025	Not detected	10/04/00	SW-846 6010
Copper by ICP	0.045	0.101	10/04/00	SW-846 6010
Lead by ICP	0.075	Not detected	10/04/00	SW-846 6010
Mercury by Cold Vapor	0.001	Not detected	10/03/00	SW-846 7470
Nickel by ICP	0.025	Not detected	10/04/00	SW-846 6010
Selenium by ICP	0.095	Not detected	10/04/00	SW-846 6010
Silver by ICP	0.025	Not detected	10/04/00	SW-846 6010
Zinc by ICP	0.065	0.832	10/04/00	SW-846 6010

# Waste Stream Technology, Inc. TCLP Pesticide Analysis 1311/8081

Site: Olin - Drum Phase Date Sampled: 09/26/00 Date Received: 09/27/00

TCLP Extraction Date: 10/02/00

Group Number: 2002-255

Units: µg/L

Matrix: TCLP Extract

WST ID: WS71814

Client ID: B - Composite

Extraction Date: 10/05/00 Date Analyzed: 10/05/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chlordane	0.350	Not detected		U
endrin	0.055	Not detected		U
gamma-BHC (Lindane)	0.016	Not detected		U
heptachlor	0.097	Not detected		U
heptachlor epoxide	0.042	Not detected	,	U
methoxychlor	0.031	Not detected		U
oxaphene	1.540	Not detected		U
Tetrachioro-m-xylene (%)		109	60-150	
Decachlorobiphenyl (%)		89	60-150	•

#### Waste Stream Technology, Inc. Herbicides in TCLP Extract 1311/8150

Site: Olin - Drum Phase Date Sampled: 09/26/00 Date Received: 09/27/00

TCLP Extraction Date: 10/02/00

Group Number: 2002-255

Units: mg/L

Matrix: TCLP Extrac

WST ID: WS71814 Client ID: B - Composite

Extraction Date: 10/03/00 Date Analyzed: 10/04/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
2,4-D	0.02	Not detected		U
2,4,5-TP (Silvex)	0.02	Not detected		Ü
2,4-DCPAA (%)		98	10-127	

PCBs in Soil SW-846 8082

Site: Olin - Drum Phase Date Sampled: 09/26/00 Date Received: 09/27/00 Group Number: 2002-255

Units: mg/Kg Matrix: Solid

WST ID: WS71814

Client ID: B - Composite

Extraction Date: 10/05/00 Date Analyzed: 10/05/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
arocior 1016	1.50	Not detected		U
aroclor 1221	1.20	Not detected		U
arocior 1232	1.80	Not detected	•	U
aroclor 1242	0.900	Not detected		U
aroclor 1248	0.600	Not detected		U
aroclor 1254	0.300	Not detected		U
aroclor 1260	0.300	Not detected		U
Decachlorobiphenyl (%)	٠,	111	60-150	
Tetrachloro-m-xylene (%)		94	60-150	

Site: Olin - Drum Phase Date Sampled: 09/26/00 Date Received: 09/27/00 Group Number: 2002-255

Matrix: Solid

WST ID: WS71814 Client ID B - Composite

Analysis	Method Reference	Detection Limit	Result	Units	Date Analyzed
Ignitability (flash point)	SW-846 1010	NA	>200	°F	10/02/00

<sup>&</sup>gt; 200 = no flash detected at a temperature up to 200 degrees Fahrenheit.



#### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

Car	vice Agreement on File? XYES	NO.		Profile Number: W	MI GN	<b>6663</b>
261		TSCA		Renewal Date:		1 1
· [	Waste Generator Information		₹.		·····	
<b></b>		er grantin (1997) er er er er er er er er er er er er er				
1.		KPULKTUN		Code: <b>१९९</b>		
3.	Facility Street Address: 51 6			one: <u>(978)658</u>	<u>-6121</u>	
5.	Facility City: WILMING 7	نم ن		te/Province: 14 A		
7.	Zip/Postal Code: 61887			nerator USEPA/Federal	10 #. M/	100 (40310
9.	County:			ate/Province ID #:		
		ORPGRATION			2 3 ) 3 S c	
		MORROW	14. Cu	istomer Fax: <u>423-3</u>	76-416	ime as above
	Billing Address			The second secon	<u> </u>	me as above
***************************************	Waste Stream Information					
1.	Description			M		
	a. Name of Waste: PARTING	<u>.64   56   64 + 64   1</u>	(&O >o~	- KESINSA 350	-( O Z	
	b. Process Generating Waste:	) KOM E LCHU	MT (UN			
	DRUM # 160 163	3 7 7 2 7 2 7 2 .	U9 /A	24 182 95 14	1 174	88 159 6
	UKUK # 160,103,	· 37, · 4, 31,	11,00			
ı	c. Color d. Strong odd	or e. Physical si	tate @ 70°F	f. Layers	g. Free	iquid range
	BLACK/ BROWN (describe):			Single Layer	l t	· I. I
	WHITE I RED CHEMIC		∏Sludge	Multi-layer		
1	CHITE / RC /	Other	<u></u>		h. pH: R	ange
				1		7.92%
						- P 1.1.
	i. Liquid Flash Point: □<73°F	□73-99°F □100-13	_	0-199°F  □≥ 200°F	ØNot ap	•
	j. Chemical Composition (List all co	nstituents [including halogenated stive analysis):	l organics, debris	, and UHC's] present in any con	centration and	submit
	် (၂၈) ရောက်ရေးမှာ	suve andiyais).				
ſ	Constituents	Concentration Range	Constitu		Conce	ntration Range
}	FLASH POINT	72 60 °F	DRUM	PAKTS DEBRIS	0-	507.
ĺ	CRESOLS	0-59 886	RETI		50	7607.
[						
	ΤΟ	FAL COMPOSITION MU	ST EQUAL O	R EXCEED 100%		
	k.   Oxidizer	/rophoric [	Explosive	☐Radioactiv	/e	
			Shock Sensi	tive ⊟Water Rea	active	•
	I. Does the waste represented by	this profile contain any c	of the carcino	gens which require OSH	A	
	notification? (list in Section B.1.				,,,,,,	☐YES ØNO
	m. Does the waste represented by	this profile contain dioxir	ns? (list in Se	ction B.1.j)		☐YES 図NO
	n. Does the waste represented by					TES MO
	If yes					
	o. Does the waste represented by	this profile contain benze	ene?	************		☐YES 図NO
	If yes, concentration	ppm				
	Is the waste subject to the benz					TYES MO
	p. Is the waste subject to RCRA S					□YES 図NO
	If no, does the waste meet the					MYES □NO
	If no, does the waste contain <5				*********	MYES   NO
	Volatile organic concentration	· · · · · · · · · · · · · · · · · · ·	ppmw			
	q. Does the waste contain any Cla	iss I or Class II ozone-de	pleting subst	ances?	*********	TYES NO
	r. Does the waste contain debris?					☑YES □NO
_		•			*	
2.	Quantity of Waste		T: 100013/	de CADerre Catherre	الكامس	
	Estimated Annual Volume	<u> </u>	ions Litar	ds ∰Drums □Other (s	pecity) _	
3.	Shipping Information	•				
	a. Packaging:		in the second se	÷		
	Bulk Solid; Type/Size5 110	+ (1-55 CM	. DRUM)[	]Bulk Liquid; Type/Size:		
	DDrum; Type; Sizelo \$ 5 6	ALCON OUER P	Иc [	]Other:	,	
	b. Shipping Frequency: Units	Pe	r: Month		time []Oth	er
	c. Is this a U.S. Department of Tra					□YES FINO
						-



### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE d. Reportable Quantity (lbs.;kgs.):
e. Hazard Class/ID#
f. USDOT Shipping Name: Now- RECULITED RESINS & SOLIOS
g. Personal Protective Equipment Requirements: e. Hazard Class/ID #:

	h. Transporter/Transfer Station:	
<b>E</b> . E	ienerator's Certification (Please check appropriate responses, sign, and date below.)	<u></u>
1.	Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2	□YES 🔀
	b. If a characteristic hazardous waste, do underlying hazardous constituents (UHCs) apply? (if yes, list in Section B.1.j)	
	Composition - B.1.)	
2.	Is this a state hazardous waste?	□YES □
3.	Is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up?	MYES □
4.	Does the waste represented by this waste profile sheet contain radioactive material, or is disposal regulated by the Nuclear Regulatory Commission?	□YES MENO
5.	Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated  Biphenyls (PCBs) regulated by 40 CFR 761? (if yes, list in Chemical Composition - B.1.j)	□YES ØI
6.	Do the waste profile sheet and all attachments contain true and accurate descriptions of the waste material, and has all relevant information within the possession of the Generator regarding known or suspected hazards pertaining to the waste been disclosed to the Contractor?	MYESNC
7.	Will all changes which occur in the character of the waste be identified by the Generator and disclosed to the Contractor prior to providing the waste to the Contractor?	toryes □
□ Chi	eck here if a Certificate of Destruction or Disposal is required.	
sample agent inform license	ample submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. I authorize WM e from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs as of the generator and has confirmed the information contained in this Profile Sheet from information provided by the generator as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary permeter that has been characterized and identified by this approved profile.  Title: # RINCIPAC CE.	authorized r and additiona its and
	(Type or Print): STEUE MORROW Company Name: OCIN CORPORATION Da	le: 11/17/
D. W 1. 2.	M Management's Decision FOR WM US  Management MethodLandfillNon-hazardous SolidificationBioremediationIncineratio	
3.	Precautions, Special Handling Procedures, or Limitation on Approval:	
4. Speci	Waste Form   5.   Source   6.   System Type	Disapproved
Sales Divisi	person's Signature: Date: on Approval Signature (Optional): Date:	
	al Waste Approvals Person Signature:	

302 Grote Street Buffalo, NY 14207 (716) 876-5290

### Analytical Data Report

Group Number: 2002-275

Site: Olin - Drum Phase

### Field and Laboratory Information

	,		Date	Date	
WST ID	Client ID	Matrix	Sampled	Received	Time
WS72604	Cyanide Solids	Solid	10/16/00	10/16/00	11:00
WS72605	Cyanide & Sulfide Solids	Solid	10/16/00	10/16/00	11:00
WS72606	Sulfide	Solid	10/16/00	10/16/00	11:00
WS72607	Flammable Resins / Solids	Solid	10/16/00	10/16/00	11:00
WS72608	+Cu	Solid	10/16/00	10/16/00	11:00
WS72609	Partially/Slightly H2O sol.Resins&Solids	Solid	10/16/00	10/16/00	11:00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	Solid	10/16/00	10/16/00	11:00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	Solid	10/16/00	10/16/00	11:00
WS72613	Oily Liquid	Oil	10/16/00	10/16/00	11:00
WS72614	Mixed Resins & Solids	Solid	10/16/00	10/16/00	11:00
WS72615	Water Sol. Liquid	Aqueous	10/16/00	10/16/00	11:00

### Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	40.0	Not detected	10/19/00
WS72605	Cyanide & Sulfide Solids	40.0	360	10/19/00
W\$72606	Sulfide	40.0	126	10/19/00
WS72607	Flammable Resins / Solids	40.0	94.8	10/19/00
WS72608	+Cu	40.0	48.2	10/20/00
— <b>&gt;</b> WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	40.1	10/20/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00
WS72613	Oily Liquid	40.0	Not detected	10/20/00
WS72614	Mixed Resins & Solids	40.0	42.3	10/20/00

### Waste Stream Technology, Inc. Ignitability (flash point) SW-846 1010

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: \*F

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	NA:	98.6	10/23/00
WS72605	Cyanide & Sulfide Solids	NA	113	10/23/00
WS72606	Sulfide	NA	77.0	10/23/00
WS72607	Flammable Resins / Solids	NA	86.0	10/23/00
WS72608	+Cu	NA	82.4	10/23/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	>200	10/23/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA	100	10/23/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA	117	10/23/00

### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: mg/Kg

WSTID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	40.0	Not detected	10/19/00
WS72605	Cyanide & Sulfide Solids	40.0	Not detected	10/19/00
WS72606	Sulfide	40.0	Not detected	10/19/00
WS72607	Flammable Resins / Solids	40.0	Not detected	10/19/00
WS72608	+Cu	40.0	Not detected	10/20/00
→ WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	Not detected	10/20/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00
WS72613	Oily Liquid	40.0	Not detected	10/20/00
WS72614	Mixed Resins & Solids	40.0	Not detected	10/20/00

### Waste Stream Technology, Inc. pH in Solid SW-846 9045C

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275 Matrix: Solid

Matrix: Solid Units: pH Units

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	NA	6.24	10/17/00
WS72605	Cyanide & Sulfide Solids	NA	7.60	10/17/00
WS72606	Sulfide	NA	7.75	10/17/00
WS7260 <b>7</b>	Flammable Resins / Solids	NA	6.11	10/17/00
WS72608	+Cu	NA	4.00	10/17/00
<b>&gt;</b> WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	7.92	10/17/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA	6.03	10/17/00
W <b>S7</b> 2611	Slightly/Partially Hexane&H2O sol.Resins	NA	7.18	10/17/00
WS72613	Oily Liquid	NA	8.49	10/17/00
WS72614	Mixed Resins & Solids	NA	2.82	10/17/00

#### **TCLP Volatile Organics Analysis** 1311/8260B

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: µg/L Matrix: TCLP Extract

WST ID: WS72609

Client ID: Partially/Slightly H2O sol.Resins&Solids

TCLP Date: 10/27/00 Date Analyzed: 10/31/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
vinyl chloride	100	Not detected	The second secon	U
1,1-dichloroethene	50	Not detected		U
chloroform	50	Not detected		U
2-butanone	1000	Not detected		U
1,2-dichloroethane	50	Not detected		U
carbon tetrachloride	50	Not detected		U
trichloroethene	50	Not detected		U
benzene	50	Not detected		U
tetrachloroethene	50	Not detected		U
chlorobenzene	50	Not detected		U
1,4-dichlorobenzerie	50	Not detected		U
1,2-Dichloroethane-d4 (%)		95	70-121	
Toluene-d8 (%)		95	81-117	•
Bromofluorobenzene (%)		88	74-121	
Dilution Factor 1				

#### 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/18/00

Group Number: 2002-275

Units: µg/L Matrix: TCLP Extract

WST ID: WS72609

Client ID: Partially/Slightly H2O sol.Resins&Solids

Extraction Date: 10/26/00 Date Analyzed: 10/27/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
pyridine	10 .	Not detected		U
1,4-dichlorobenzene	10	Not detected		U
Total cresols(o,m & p)	30	59		
nitrobenzene	10	Not detected		U
hexachloroethane	10	Not detected		U
hexachlorobutadiene	10 ,	Not detected		U
2,4,6-trichlorophenol	10	Not detected		U
2,4,5-trichlorophenol	10	Not detected		U
2,4-dinitrotoluene	10	Not detected		U
hexachlorobenzene	10	Not detected		U
pentachlorophenol	50	Not detected		U
2-Fluorophenol (%)		46	21- 100	
Phenol-d6 (%)		19	10-94	
Nitrobenzene-d5 (%)		89	35-114	
2-Fluorobiphenyl (%)		80	43-116	
2,4,6-Tribromophenol (%)		106	10- 123	
Terphenyl-d14 (%)		172	33- 141	#

#### **TCLP Pesticide Analysis** 1311/8081

Site: Olin - Drum Phase Date Sampled: 10/16/00

Date Received: 10/16/00

TCLP Extraction Date: 10/18/00

Group Number: 2002-275

Units: μg/L Matrix: TCLP Extrac.

WST ID: WS72609

lient ID: Partially/Slightly H2O sol.Resins&Solids

Extraction Date: 10/26/00 Date Analyzed: 10/28/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chlordane	0.350 .	Not detected		U
endrin	0.055	Not detected		U
gamma-BHC (Lindane)	0.016	Not detected		U
heptachlor	0.097	Not detected		U
heptachlor epoxide	0.042	Not detected		Ų
methoxychlor	0.031	Not detected		U .
toxaphene	1.540	Not detected		U .
Tetrachloro-m-xylene (%)		86	60-150	
Decachlorobiphenyl (%)		72	60- 150	

#### Herbicides in TCLP Extract 1311/8150

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/18/00

Group Number: 2002-275

Units: mg/L

Matrix: TCLP Extract

WST ID: WS72609

fient ID: Partially/Slightly H2O sol.Resins&Solids

Extraction Date: 10/26/00 Date Analyzed: 10/29/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
2,4-D	0.02	Not detected	l	U
2,4,5-TP (Silvex)	0.02	Not detected		U
2,4-DCPAA (%)		106	10-127	

Dilution Factor

8

# Waste Stream Technology, Inc. TCLP Metals Analysis Result Report

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: mg/L

Matrix: TCLP Extra

TCLP Extraction Date: 10/18/00

WST ID: WS72609

Client ID: Partially/Slightly H2O sol.Resins&Solids

Digestion Date: 10/20/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	0.045	0.060	10/20/00	SW-846 6010
Barium by ICP	0.025	0.044	10/20/00	SW-846 6010
Cadmium by ICP	0.025	Not detected	10/20/00	SW-846 6010
Chromium by ICP	0.025	0.038	10/20/00	SW-846 6010
Copper by ICP	0.045	0.158	10/20/00	SW-846 6010
Lead by ICP	0.075	Not detected	10/20/00	SW-846 6010
Mercury by Cold Vapor	0.001	Not detected	10/23/00	SW-846 7470
Nickel by ICP	0.025	Not detected	10/20/00	SW-846 6010
Selenium by ICP	0.095	Not detected	10/20/00	SW-846 6010
Silver by ICP	0.025	Not detected	10/20/00	SW-846 6010
Zinc by ICP	0.065	0.436	10/20/00	SW-846 6010

PCBs in Soil SW-846 8082

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: mg/Kg Matrix: Solid

WST ID: WS72609

Client ID: Partially/Slightly H2O sol.Resins&Solids

Extraction Date: 10/27/00 Date Analyzed: 10/27/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
aroclor 1016	0.750	Not detected		U
aroclor 1221	0.600	Not detected		U
aroclor 1232	0.900	Not detected		U
aroclor 1242	0.450	Not detected		U
arocior 1248	0.300	Not detected		U
aroclor 1254	0.150	Not detected		U
arocior 1260	0.150	Not detected		U
Decachlorobiphenyl (%)		83	60- 150	
Tetrachloro-m-xylene (%)		85	60-150	

#### **METHODOLOGIES**

The specific methodologies employed in obtaining the analytical data reported are indicated on each of the result forms. The method numbers shown refer to the following U.S. Environmental Protection Agency Reference:

Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020, March 1979, Revised 1983, U.S. Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268.

Federal Register, 40 CFR Part 136: Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act. Revised July 1992.

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. Third Edition, Revised December 1996, U.S. EPA SW-846.

Annual Book of ASTM Standards, Volume II. ASTM, 100 Harbor Drive, West Conshohocken, PA 19428-2959.

Standard Methods for the Examination of Water and Wastewater. (20th Edition). American Public Health Association, 1105 18th Street, NW, Washington, D.C. 20036.

#### ORGANIC DATA QUALIFIERS

- U Indicates compound was analyzed for but not detected.
- J Indicates an estimated value. This flag is used to qualify the following: when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed; a compound is detected in the sample but the result is less than the method quantitation limit but greater than the statistically calculated laboratory method detection limit; the result for a compound is estimated due to the analysis of a sample beyond the USEPA defined holding time; the result for a compound is estimated due to a quality control sample result that is outside the laboratory quality control recovery limits.
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as the sample.
- E This flag identifies all compounds whose concentrations exceed the calibration range of the GC/MS instrument of that specific analysis.
- **D** This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- **G** Matrix spike recovery is greater than the expected upper limit of analytical performance.
- L Matrix spike recovery is less than the expected lower limit of analytical performance.
- # \_ Indicates that a surrogate recovery was found to be outside the expected limits of analytical performance.
- \$ Indicates that the surrogate compound was diluted out. The sample had to be diluted to obtain analytical results and a recovery could not be calculated.
- (%) Indicates that the compound is a surrogate and that the value reported for this compound is in percent recovery. The quality control recovery limits are indicated in the detection limit or QC limits column.

#### Case Narrative

The following comments and observations were made regarding the analysis of the composite samples from the Olin Drum Project site for Sevenson Environmental Services, Inc. corresponding to the Waste Stream Technology Inc. sample group number 2002-275 and sample numbers WS72604 through WS72615 which were composited on 10/18/00;

- 1.0 Sample Number WS72612 (Cyanide Liquid)
  - 1.1 Only one Olin Drum Project sample was identified as being a cyanide containing liquid. The volume of liquid received for this sample, designated as Waste Stream Technology sample ID number WS72612 was insufficient to perform the required TCLP analyses. Since additional sample volume could not be obtained, all of the analyses to be performed on WS72612 were canceled.
- 2.0 Sample Number WS72613 (Oily Liquid)
  - 2.1 Sample number WS72613 was an oily liquid that was not amenable to TCLP filtration, Subsequently, waste dilution analyses had to be performed on the sample. The results for sample number WS72613 are, therefore, reported on a weight per unit weight basis (i.e.,  $\mu g/kg$  or mg/kg basis).
- 3.0 Sample Number WS72615 (Water Soluble Liquid)
  - 2.1 Sample number WS72615 was a water soluble liquid that was not amenable to TCLP filtration, Subsequently, the TCLP analyses were performed on the unfiltered sample. As such, the TCLP date was listed as NA on the TCLP result report sheets.

Danie W. Vou	Date	11/3/00
Daniel W. Vollmer		
QA/QC Officer		



## GENERATOR'S WASTE PROFILE SHEET PLEASE PRINT IN INK OR TYPE

Service Agreement on File? XYES	NO	Profile Number: V	VMI CN68/2
☐ Hazardous ☐ Non-Hazardous ☐	TSCA	Renewal Date:	1 1
A. Waste Generator Information			ė.
1. Generator Name: OLIN Col 3. Facility Street Address: 51 EN 5. Facility City: LUIL MINGTON 7. Zip/Postal Code: 01887	MET ST	2. SIC Code: 9999 4. Phone: (979) 658 6. State/Province: MA MA 8. Generator USEPA/Federal	'-6(21 ID#: MKD 00 1403104
9. County:		10. State/Province ID #:	/ <u>11/11/15/15/15/15/15/15/15/15/15/15/15/1</u>
	PURATION	12. Customer Phone: (42	13)336-4511
13. Customer Contact: <u>57<i>e</i>し</u> を	MORKOW		386-4166
15. Billing Address			⊠Same as above
B. Waste Stream Information	 	en en en en en en en en en en en en en e	
<ol> <li>Description         <ul> <li>a. Name of Waste: レルイモメ</li> <li>b. Process Generating Waste:</li></ul></li></ol>	SOLUIBLE LIQ RUM REMOUNL		
DRUM # 081			
c. Color  d. Strong odor (describe):  CHOMICA	☐Solid 🔀	@ 70°F  f. Layers  Liquid  ⊠Single Layer  Sludge	g. Free liquid range to % h. pH: Range
			to / 2, 3 %
j. Chemical Composition (List all con-	73-99°F100-139°F stituents [including halogenated organized analysis):	☐140-199°F <b>©≥ 200°F</b> anics, debris, and UHC's] present in any con	☐Not applicable centration and submit
Constituents	Concentration Range	Constituents	Concentration Range
SULFIDE	48.1 PPM	SEC ATTWENCED	
CHLORUE OR ON	10 006	TCLP HAULYSIS	
DRUM PRATS/DEBRIS	0-1507.	WS 72615	
LIQUIO	50 - 106 7.	QUAL OR EXCEED 100%	
k. Oxidizer Pyr Carcinogen Infe	rophoric Expectious Sho	olosive	active A
notification? (list in Section B.1.j)	*************************************		□YES MO
m. Does the waste represented by t	his profile contain dioxins?	(list in Section B.1.j)	
n. Does the waste represented by the	ils profile contain aspestos	~	□YES ØNO
o. Does the waste represented by the	nis profile contain honzana	friable 🗀 nor	
If yes, concentration	ppm		TYES DENO
		AP?	YES ⊠NO
p. is the waste subject to RCRA Su	opart CC controls?	* **	YES ⊠NO
If no, does the waste meet the or	ganic LDR Exemption?	***************************************	TYES JNO
If no, does the waste contain <50	0 ppmw volatile organic (V	O)?	MYES NO
Volatile organic concentration	ppm	W	
		•	
<ul><li>q. Does the waste contain any Clas</li><li>r. Does the waste contain debris? (</li></ul>	list in Section B.1.j)	my substances?	PYES NO
2. Quantity of Waste Estimated Annual Volume		s ☐Yards MDrums ☐Other (s	,
3. Shipping Information			
a. Packaging:			•
Bulk Solid; Type/Size:		☐Bulk Liquid; Type/Size:	
Drum; Type; Size: 85 CM		Other:	
b. Shipping Frequency: Units	Per:⊡I	Month	me []Other
c. Is this a U.S. Department of Trans	sportation (USDOT) Hazard	dous Material? (If no, skip $\overline{d}$ , e, an	d f) DYES MNO



## GENERATOR'S WASTE PROFILE SHEET PLEASE PRINT IN INK OR TYPE

	. Reportable Quantity (lbs.;kgs.): e. Hazard Class/ID		
f.	USDOT Shipping Name: NON- RECULATED WATER SOLUTRIE	. L(@ULD	
g	Personal Protective Equipment Requirements:		
h	Transporter/Transfer Station:		
	nerator's Certification (Please check appropriate responses, sign, and date below.)	<del> </del>	
e. Ut	nerator's Certification (Flease clieck appropriate responses, sign, and date below.)	eto esperatura recordo en trabajo especialista de especialista de especialista en especialista en especialista	
1.	Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2		□YES 図い
	a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D, F, K, P, U)		•
			:
	b. If a characteristic hazardous waste, do underlying hazardous constituents (UHCs) apply? (if yes, list in Section B.1.j)	TYES DNO	
	c. Does this waste contain debris? (if yes, list size and type in Chemical	[]([5] [](0)	
	Composition - B.1.)	TYES NO	• • •
			:
2.	is this a state hazardous waste?	************************	□YES ØI-~
	Identify ALL state hazardous waste codes		
			:
3.	is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up?	*********************	SYES DAJ
	If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site of	ean-up	•
	activity. For state mandated clean-up, provide relevant documentation. MHDEP, 216	5174 \$ 3-	6471
4,	Does the waste represented by this waste profile sheet contain radioactive material, or is dispos		
₹.	regulated by the Nuclear Regulatory Commission?		□YES ⊠NO
			- year
5.	Does the waste represented by this waste profile sheet contain concentrations of Polychlorinate		: 
	Biphenyls (PCBs) regulated by 40 CFR 761? (if yes, list in Chemical Composition - B.1.j)		TYES E
	a. If yes, were the PCBs imported into the U.S.?	TYES DNO	
6.	Do the waste profile sheet and all attachments contain true and accurate descriptions of the was	ite	
	material, and has all relevant information within the possession of the Generator regarding know	n or	
	suspected hazards pertaining to the waste been disclosed to the Contractor?		ØYES □NO
7.	Will all changes which occur in the character of the waste be identified by the Generator and dis	cionad	
• •	to the Contractor prior to providing the waste to the Contractor?	Cioseo	XYES ON
Cne	k here if a Certificate of Destruction or Disposal is required.		
Any sar	uple submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent	method. I authorize WM	to obtain a
sample	from any waste shipment for purposes of recertification. If this certification is made by a broker, t	he undersigned signs as	authorized
	the generator and has confirmed the information contained in this Profile Sheet from information		
licenses	ion as it has determined to be reasonably necessary. If approved for management, Contractor hi for the waste that has beer/characterized and identified by this approved profile.	as all the necessary perr	nits and
		_	•
		RINCIPHE EN	
Name		RACRATION DO	
		umber of attached page	ges <u>/2</u>
	Management's Decision	FOR WM U	
1.	Management MethodLandfillNon-hazardous SolidificationBioremedi	ation [Incineration	on
_	☐Hazardous Stabilization ☐Other (Specify)		
2.	Proposed Ultimate Management Facility:		Manager and the second
3.	Precautions, Special Handling Procedures, or Limitation on Approval:	W-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	
4.	Waste Form 5. Source 6.		
Special	Waste Decision		Disapproved
	erson's Signature:	Date:	
	Approval Signature (Optional):  Waste Approvals Person Signature:	Date:	
القاماعات	THANG APPIUTAIS ESISUII SIGIIAUIS.	Date:	

302 Grote Street Buffalo, NY 14207 (716) 876-5290

#### Analytical Data Report

Group Number: 2002-275

Site: Olin - Drum Phase

#### Field and Laboratory Information

		•	Date	Date	
WSTID	Client ID	Matrix	Sampled	Received	Time
WS72604	Cyanide Solids	Solid	10/16/00	10/16/00	11:00
WS72605	Cyanide & Sulfide Solids	Solid	10/16/00	10/16/00	11:00
WS72606	Sulfide	Solid	10/16/00	10/16/00	11:00
WS72607	Flammable Resins / Solids	Solid	10/16/00	10/16/00	11:00
WS72608	+Cu	Solid	10/16/00	10/16/00	11:00
WS72609	Partially/Slightly H2O sol.Resins&Solids	Solid	10/16/00	10/16/00	11:00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	Solid	10/16/00	10/16/00	11:00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	Solid	10/16/00	10/16/00	11:00
WS72613	Oily Liquid	Oil	10/16/00	10/16/00	11:00
WS72614	Mixed Resins & Solids	Solid	10/16/00	10/16/00	11:00
WS72615	Water Sol. Liquid	Aqueous	10/16/00	10/16/00	11:00

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

Group Number: 2002-275

Matrix: Aqueous

WST ID: WS72615

Client ID Water Sol. Liquid

Analysis	Method Reference	Detection Limit	Result	Units	Date Analyzed
pH Analysis Result	SW-846 9040C	NA	12.30	. pH Units	10/17/00



Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Aqueous

WST ID: WS72615

Client ID Water Sol. Liquid

Analysis	Method Reference	Detection Limit	Result	Units	Date Analyzed
Ignitability (flash point)	SW-846 1010	NA	>200	°F	10/19/00
		•			

<sup>&</sup>gt; 200 = no flash detected at a temperature up to 200 degrees Fahrenheit



Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Aqueous

WST ID: WS72615

Client ID Water Sol. Liquid

Analysis	Method Reference	Detection Limit	Result	Units	Date Analyzed
Section 7.3.3.2 Reactive Cyanide	SW-846 9014	40.0	Not detected	mg/L	10/19/00
Section 7.3.4.2 Reactive Sulfide	SW-846 9034	40.0	48.1	mg/L	10/19/00



#### TCLP Volatile Organics Analysis 1311/8260B

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: µg/L Matrix: Aqueous

WST ID: WS72615

Client ID: Water Sol. Liquid

TCLP Date: NA

Date Analyzed: 10/31/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
vinyl chloride	100	Not detected		U
1,1-dichloroethene	50	Not detected		U
chloroform	50	10		J
2-butanone	1000	Not detected		U
1,2-dichloroethane	50	Not detected		U
carbon tetrachloride	50	Not detected		U
trichloroethene	50	Not detected		U
benzene	<b>50</b> .	Not detected		U
tetrachloroethene	50	Not detected		U
chlorobenzene	50	Not detected		U
1,4-dichlorobenzene	50	Not detected		U
1,2-Dichloroethane-d4 (%)		92	70-121	
Toluene-d8 (%)		97	81-117	
Bromofluorobenzene (%)		90	74-121	

**Dilution Factor** 

4

## 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 TCLP Extraction Date: NA Group Number: 2002-275

Units: µg/L Matrix: Aqueous

WST ID: WS72615

Client ID: Water Sol. Liquid

Extraction Date: 10/26/00 Date Analyzed: 10/27/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
pyridine	125	Not detected		U
1,4-dichlorobenzene	125	Not detected		U
Total cresols(o,m & p)	375	Not detected		U
nitrobenzene	125	Not detected		U
hexachloroethane	125	Not detected		U
hexachlorobutadiene	125	Not detected	•	U
2,4,6-trichlorophenol	125	Not detected		U
2,4,5-trichlorophenol	125	Not detected		U
2,4-dinitrotoluene	125	Not detected	•	U
hexachlorobenzene	125	Not detected		U
pentachlorophenol	625	Not detected		U
2-Fluorophenol (%)		<b>8</b> 5	21-100	
Phenol-d6 (%)		56	10-94	•
Nitrobenzene-d5 (%)		17	35- 114	#
2-Fluorobiphenyl (%)		104	43-116	
2,4,6-Tribromophenol (%)		120	10-123	
Terphenyl-d14 (%)		100	33-141	

**Dilution Factor** 

12.5

TCLP Pesticide Analysis 1311/8081

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 TCLP Extraction Date: NA Group Number: 2002-275

Units: µg/L Matrix: Aqueous

WST ID: WS72615

lient ID: Water Sol. Liquid

Extraction Date: 10/27/00
Date Analyzed: 10/28/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chlordane	4.20	Not detected		U
endrin	0.660	Not detected		U
gamma-BHC (Lindane)	0.192	Not detected	•	U
heptachlor	1.16	Not detected		U
heptachlor epoxide	0.504	Not detected		U
methoxychlor	0.372	Not detected		U
toxaphene	18.5	Not detected		U
Tetrachloro-m-xylene (%)		91	60- 150	
Decachlorobiphenyl (%)		81	60- 150	

**Dilution Factor** 

12

## Herbicides in TCLP Extract 1311/8150

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 TCLP Extraction Date: NA Group Number: 2002-275

Units: mg/L Matrix: Aqueous

WST ID: WS72615

lient ID: Water Sol. Liquid

Extraction Date: 10/26/00 Date Analyzed: 10/30/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
2,4-D	0.100	Not detected		U
2,4,5-TP (Silvex)	0.100	Not detected		U
2,4-DCPAA (%)		60	10-127	

**Dilution Factor** 

5

PCBs in Water SW-846 8082

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: µg/L Matrix: Aqueous

WST ID: WS72615

Client ID: Water Sol. Liquid

Extraction Date: 10/23/00 Date Analyzed: 10/24/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
arocior 1016	0.25	Not detected		U
aroclor 1221	0.31	Not detected		U .
arocior 1232	0.27	Not detected		U
aroctor 1242	0.23	Not detected		U .
arocior 1248	0.32	Not detected		U
aroclor 1254	0.26	Not detected		U
aroclor 1260	0.24	Not detected		U
Decachlorobiphenyl (%)		21	60-150	#
Tetrachloro-m-xylene (%)	special and applications of the second secon	38	60-150	#

#### **METHODOLOGIES**

The specific methodologies employed in obtaining the analytical data reported are indicated on each of the result forms. The method numbers shown refer to the following U.S. Environmental Protection Agency Reference:

Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020, March 1979, Revised 1983, U.S. Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268.

Federal Register, 40 CFR Part 136: Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act. Revised July 1992.

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. Third Edition, Revised December 1996, U.S. EPA SW-846.

Annual Book of ASTM Standards, Volume II. ASTM, 100 Harbor Drive, West Conshohocken, PA 19428-2959.

Standard Methods for the Examination of Water and Wastewater. (20th Edition). American Public Health Association, 1105 18th Street, NW, Washington, D.C. 20036.

#### ORGANIC DATA QUALIFIERS

- U Indicates compound was analyzed for but not detected.
- J Indicates an estimated value. This flag is used to qualify the following: when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed; a compound is detected in the sample but the result is less than the method quantitation limit but greater than the statistically calculated laboratory method detection limit; the result for a compound is estimated due to the analysis of a sample beyond the USEPA defined holding time; the result for a compound is estimated due to a quality control sample result that is outside the laboratory quality control recovery limits.
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as the sample.
- E This flag identifies all compounds whose concentrations exceed the calibration range of the GC/MS instrument of that specific analysis.
- D This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G Matrix spike recovery is greater than the expected upper limit of analytical performance.
- Matrix spike recovery is less than the expected lower limit of analytical performance.
- # \_ Indicates that a surrogate recovery was found to be outside the expected limits of analytical performance.
- \$ Indicates that the surrogate compound was diluted out. The sample had to be diluted to obtain analytical results and a recovery could not be calculated.
- (%) Indicates that the compound is a surrogate and that the value reported for this compound is in percent recovery. The quality control recovery limits are indicated in the detection limit or QC limits column.

#### Case Narrative

The following comments and observations were made regarding the analysis of the composite samples from the Olin Drum Project site for Sevenson Environmental Services, Inc. corresponding to the Waste Stream Technology Inc. sample group number 2002-275 and sample numbers WS72604 through WS72615 which were composited on 10/18/00;

- 1.0 Sample Number WS72612 (Cyanide Liquid)
  - 1.1 Only one Olin Drum Project sample was identified as being a cyanide containing liquid. The volume of liquid received for this sample, designated as Waste Stream Technology sample ID number WS72612 was insufficient to perform the required TCLP analyses. Since additional sample volume could not be obtained, all of the analyses to be performed on WS72612 were canceled.
- 2.0 Sample Number WS72613 (Oily Liquid)
  - 2.1 Sample number WS72613 was an oily liquid that was not amenable to TCLP filtration, Subsequently, waste dilution analyses had to be performed on the sample. The results for sample number WS72613 are, therefore, reported on a weight per unit weight basis (i.e.,  $\mu g/kg$  or mg/kg basis).
- 3.0 Sample Number WS72615 (Water Soluble Liquid)
  - 2.1 Sample number WS72615 was a water soluble liquid that was not amenable to TCLP filtration, Subsequently, the TCLP analyses were performed on the unfiltered sample. As such, the TCLP date was listed as NA on the TCLP result report sheets.

Daniel W. Vollmer
QA/QC Officer

Date 1/3/00



#### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

	vice Agreement on File? ⊠YES ☐ Hazardous ⊠Non-Hazardous ☐ Waste Generator Information	]no ]tsca	Profile Number Renewal Date:	: wмi <u>CN</u> 6883
1. 3. 5. 7. 9. 11. 13.	Generator Name: OLIN Facility Street Address: 51 E Facility City: LILMING Zip/Postal Code: OLTS County: Customer Name: OLIN E Customer Contact: 5700E Billing Address Waste Stream Information Description a. Name of Waste: LS b. Process Generating Waste:	OKPURATION  MONROW  71718 EOMPO  DRUM REMOUN	4. Phone: (971) 6 6. State/Province: 14 8. Generator USEPA/Fedi 10. State/Province ID#: 12. Customer Phone: 14. Customer Fax: 42	58 - 612 ( Heral ID #: MAD 04 14 0310 (423) 336 - 451
	DRUM # 7,114,1  c. Color d. Strong odd (describe):	<b>⊠</b> Solid □	<del></del>	g. Free liquid range to % h. pH: Range to 7.73 %
		itive analysis);	ganics, debris, and UHC's) present in an	y concentration and submit
	Constituents  FLATH POINT  REACTIVE SULFIDE  CRESSE	Concentration Range	Constituents DRUM PRATT/ DETSA SECOS SEE ATTACHER TO ANKUSSI US 717	50-1007, LP
•	k. Oxidizer Py Carcinogen Infi I. Does the waste represented by	rrophoric	EQUAL OR EXCEED 100%  plosive	active Reactive
	notification? (list in Section B.1.) m. Does the waste represented by n. Does the waste represented by lf yes	this profile contain dioxins? this profile contain asbestos	' (list in Section B.1.j)s?	∴
	<ul> <li>Does the waste represented by If yes, concentration Is the waste subject to the benz</li> <li>Is the waste subject to RCRA So If no, does the waste meet the off no, does the waste contain &lt;5</li> <li>Volatile organic concentration</li> </ul>	ppm ene waste operations NESH ubpart CC contróls? organic LDR Exemption? 00 ppmw volatile organic (V	-IAP?	
	<ul><li>q. Does the waste contain any Clar</li><li>r. Does the waste contain debris?</li></ul>			
2.	Quantity of Waste Estimated Annual Volume	<b>≸</b> □Ton	is	r (specify)
3.	Shipping Information  a. Packaging:  Bulk Solid; Type/Size:  Drum; Type; Size: \$5 6  b. Shipping Frequency: Units  c. Is this a U.S. Department of Trai	<b>%</b> , Per.□	Bulk Liquid; Type/S Other: ]MonthQuarterYear ⊠Ordous Material? (If no. skip d. e	ne time   Other

Form WMI-4153 (03/99)



### GENERATOR'S WASTE PROFILE SHEET PLEASE PRINT IN INK OR TYPE

d.	Reportable Quantity (lbs.;kgs.): e. Hazard Class/ID #:	
f.	USDOT Shipping Name: NON- RECULATED SOLIDS	
g.		
h.	Transporter/Transfer Station:	······································
C. Ger	nerator's Certification (Please check appropriate responses, sign, and date below).)	
1.	Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2	□AES MO
	a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D, F, K, P, U)	
	b. If a characteristic hazardous waste, do underlying hazardous constituents	v
	(UHCs) apply? (if yes, list in Section B.1.j)	
	Composition - B.1.)	
_	to this a state homeway, a sector	
2.	is this a state hazardous waste?	TYES BUNO
	(Advisor) Francisco Control Co	
3.	Is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up?	-A
J.	If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site clean-up	EXES DNO
	activity. For state mandated clean-up, provide relevant documentation. MADEP 21 E 5174 & 03-	0471
4.	Does the waste represented by this waste profile sheet contain radioactive material, or is disposal	
- <b>*</b> -	regulated by the Nuclear Regulatory Commission?	TYES MO
_		
5.	Does the waste represented by this waste profile sheet contain concentrations of Polychiorinated Biphenyls (PCBs) regulated by 40 CFR 761? (if yes, list in Chemical Composition - B.1.j)	
	a. If yes, were the PCBs imported into the U.S.?YES \( \text{NO IF } \) in YES \( \text{NO IF } \) NO	□YES MO
6.	Do the waste profile sheet and all attachments contain true and accurate descriptions of the waste	
	material, and has all relevant information within the possession of the Generator regarding known or suspected hazards pertaining to the waste been disclosed to the Contractor?	SEYES INO
	The state of the s	BRIES FINO
7.	Will all changes which occur in the character of the waste be identified by the Generator and disclosed	
***************************************	to the Contractor prior to providing the waste to the Contractor?	BYES □NO
□Chec	k here if a Certificate of Destruction or Disposal is required.	
Anv sam	ple submitted is representative as defined in 40 CFR 261 - Appendix i or by using an equivalent method. I authorize Wi	t to obtain o
sample f	rom any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs as	suthorized
agent of	the generator and has confirmed the information contained in this Profile Sheet from information provided by the general	or and additional
licenses	on as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary pen for the waste that has been cyleracterized and identified by this approved profile.	nits and
	ition Signature: Title: PRINCIPAC ENU.	
ivame (	Type or Print): STEVE MAKREW Company Name: BUN CARPORATOR DI	ate: <u>11/07/</u> 1
	Check if additional information is attached. Indicate the number of attached pa	ges <u>!(</u>
D. WM	Management's Decision FOR WM U	SE ONLY
1.	Management Method   Landfili   Non-hazardous Solidification   Bioremediation   Incineretian	
	☐Hazardous Stabilization ☐Other (Specify)	
2.	Proposed Ultimate Management Facility:	
3.	Precautions, Special Handling Procedures, or Limitation on Approval:	
•		
	Mich Com	
A. Canadal	Waste Form 5. Source 6. System Type	
•	and a sub-control of the sub-con	Disapproved
	Approval Signature (Optional):  Waste Approvals Person Signature:  Date:	
	Data:	

### COMPOSITE FORM

Composite ID: D W 571718

CLIENT ID	Grams
007	72
114	73
115	73
104	74
161	75
164	74
164	7.2
	513
	•
	,

## Waste Stream Technology, Inc. Ignitability (flash point) SW-846 1010

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00 Group Number: 2002-253

Matrix: Solid Units: \*F

WSTID	Client ID	Detection Limit	Result	Date Analyzed
WS71715	A - Composite	NA	127	09/27/00
WS71716	B - Composite	NA	>200	09/27/00
→ WS71718	D - Composite	NA	>200	09/27/00
WS71719	E - Composite	. NA	>200	09/27/00

#### Waste Stream Technology, Inc. pH in Solid SW-846 9045C

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00 Group Number: 2002-253

Matrix: Solid Units: pH Units

WST ID	Client ID	Detection Limit_	Result	Date Analyzed
WS71715	A - Composite	NA	4.46	09/28/00
WS71716	B - Composite	. NA	7.32	09/28/00
─>WS71718	D - Composite	NA NA	7.73	09/28/00
WS71719	E - Composite	. NA	6.36	09/28/00

#### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00 Group Number: 2002-253

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS71715	A - Composite	40.0	Not detected	09/29/00
WS71716	B - Composite	40.0	Not detected	09/29/00
→> WS71718	D - Composite	40.0	Not detected	09/29/00
WS71719	E - Composite	40.0	Not detected	09/29/00

#### Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00 Group Number: 2002-253

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS71715	A - Composite	40.0	118	09/29/00
WS71716	B - Composite	40.0	81.8	09/29/00
→>ws71718	D - Composite	40.0	118	09/29/00
WS71719	E - Composite	40.0	40.9	09/29/00

## Waste Stream Technology, Inc. PCBs in Soil SW-846 8082

Site: Olin - Drum Phase Date Sampled: 09/25/00

Date Received: 09/26/00

Group Number: 2002-253

Units: mg/Kg Matrix: Solid

WST ID: WS71718

Client iD: D - Composite

Extraction Date: 09/28/00 Date Analyzed: 09/29/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
aroclor 1016	0.05	Not detected		U
aroclor 1221	0.04	Not detected		U
aroclor 1232	0.06	Not detected		U
aroclor 1242	0.03	Not detected	·	U
aroclor 1248	0.02	Not detected		U
aroclor 1254	0.01	Not detected		U
aroclor 1260	0.01	Not detected		U ,
Decachlorobiphenyl (%)		69	60-150	
Tetrachloro-m-xylene (%)		63	60-150	

### Waste Stream Technology, Inc. TCLP Metals Analysis Result Report

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00 Group Number: 2002-253

Units: mg/L

Matrix: TCLP Extract

TCLP Extraction Date: 09/27/00

WST ID: WS71718 Client ID: D - Composite

Digestion Date: 10/02/00

Aпаlyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	0.045	Not detected	10/02/00	SW-846 6010
Barium by ICP	0.025	Not detected	10/02/00	SW-846 6010
Cadmium by ICP	0.025	Not detected	10/02/00	SW-846 6010
Chromium by ICP	0.025	Not detected	10/02/00	SW-846 6010
Copper by ICP	0.045	Not detected	10/02/00	SW-846 6010
Lead by ICP	0.075	Not detected	10/02/00	SW-846 6010
Mercury by Cold Vapor	0.001	Not detected	10/03/00	SW-846 7470
Nickel by ICP	0.025	Not detected	10/02/00	SW-846 6010
Selenium by ICP	0.095	Not detected	10/02/00	SW-846 6010
Silver by ICP	0.025	Not detected	10/02/00	SW-846 6010
Zinc by ICP	0.065	0.071	10/02/00	SW-846 6010

## Waste Stream Technology, Inc. Herbicides in TCLP Extract 1311/8150

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00

TCLP Extraction Date: 09/27/00

Group Number: 2002-253

Units: mg/L

Matrix: TCLP Extra

WST ID: WS71718

Client ID: D - Composite

Extraction Date: 09/28/00

Date Analyzed: 09/29/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
2,4-D	0.02	Not detected		U
2,4,5-TP (Silvex)	0.02	Not detected	·	U
2,4-DCPAA (%)		91	10-127	

**Dilution Factor** 

1

#### Waste Stream Technology, Inc. TCLP Pesticide Analysis 1311/8081

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00

TCLP Extraction Date: 09/27/00

Group Number: 2002-253

Units: µg/L Matrix: TCLP Extract

WST ID: WS71718

Client ID: D - Composite

Extraction Date: 10/02/00 Date Analyzed: 10/04/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chlordane	0.350	Not detected		U
endrin	0.055	Not detected		U
gamma-BHC (Lindane)	0.016	Not detected		U
neptachlor	0.097	Not detected		U
neptachlor epoxide	0.042	Not detected		U
nethoxychlor	0.031	Not detected		U
охарћепе	1.540	Not detected		U
Tetrachloro-m-xylene (%)	•	57	60-150	#
Decachlorobiphenyl (%)		83	60-150	•

## Waste Stream Technology, Inc. 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00

TCLP Extraction Date: 09/27/00

Group Number: 2002-253

Units: µg/L

Matrix: TCLP Extra t

WST ID: WS71718

Client ID: D - Composite

Extraction Date: 09/26/00 Date Analyzed: 09/29/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifie
pyridine	10 .	Not detected		U
1,4-dichlorobenzene	10	Not detected	•	U
Total cresols(o,m & p)	30	201		
nitrobenzene	10	Not detected		U
hexachloroethane	10	Not detected		U
hexachlorobutadiene	10	Not detected		U
2,4,6-trichlorophenol	10	Not detected		U
2,4,5-trichlorophenol	10	Not detected		U
2,4-dinitrotoluene	10	Not detected		U
hexachlorobenzene	10	Not detected		U
pentachlorophenol	, <b>50</b>	Not detected		U
2-Fluorophenol (%)		46	21-100	
Phenol-d6 (%)		23	10-94	
Nitrobenzene-d5 (%)		95	35-114	
2-Fluorobiphenyl (%)		86	43-116	
2,4,6-Tribromophenol (%)		120	10-123	
Γerpheπyl-d14 (%)		94	33-141	

Dilution Factor

4

#### Waste Stream Technology, Inc. TCLP Volatile Organics Analysis 1311/8260B

Site: Olin - Drum Phase Date Sampled: 09/25/00

Group Number: 2002-253

Units: µg/L

Matrix: TCLP Extract

Date Received: 09/26/00

WST ID: WS71718 Client ID: D - Composite TCLP Date: 10/02/00

Date Analyzed: 10/03/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
vinyl chloride	100	Not detected	· · · · · · · · · · · · · · · · · · ·	U
1,1-dichloroethene	50	Not detected		υ
chloroform	50	Not detected		U
2-butanone	1000	Not detected		U
1,2-dichloroethane	50	Not detected		U
carbon tetrachloride	50	Not detected		U
richloroethene	50	Not detected		υ
penzene	<b>5</b> 0	Not detected		U
etrachioroethene	50	Not detected		υ
chlorobenzene	50	Not detected		U
,4-dichlorobenzene	50	Not detected		U ·
,2-Dichloroethane-d4 (%)		105	70- 121	
foluene-d8 (%)	•	97	81-117	
Bromofluorobenzene (%)		105	74- 121	



### GENERATOR'S WASTE PROFILE SHEET PLEASE PRINT IN INK OR TYPE

Hazard	reement on File? ☑YES ☐ ous ☑Non-Hazardous ☐ Generator Information	NO TSCA		Number: WMI wal Date:	<u>CN6885</u>
1. Gene 3. Facilit 5. Facilit 7. Zip/Po 9. Count 11. Custo 13. Custo 15. Billing B. Waste 1. Desci	rator Name: OCIP C y Street Address: 51 6A y City: WILMINGTO ostal Code: 01887 y: mer Name: OCIP Co mer Contact: 57cvu Address Stream Information iption ame of Waste: U571 occess Generating Waste:	W WORKOW MORROW 119 COMPOSITE DRUM REMOUR	6. State/Province 8. Generator USI 10. State/Province 12. Customer Pho 14. Customer Fax	7 9 9 9 7 3 ) 6 5 8 - 6 : がれ EPA/Federal ID # e ID #:	(21 :MND 001403104 ) 376 - 4511
c. Co	lor d. Strong odo (describe):	r e. Physical state	]Liquid ⊠Sing	gle Layer ti-layer	Free liquid range to %  pH: Range to 6.36%
j. Ci Consti	representation (List all con representation)	□73-99°F □100-139°F stituents [including halogenated orgive analysis]:  Concentration Range > 2 ce */F	anics, debris, and UHC's) po	resent in any concentr	Concentration Range
· · · · · · · · · · · · · · · · · · ·	THE SULPIONS THE	0-41 ppm 0-105 pph	DRUM PRATS/ 3 OC LOS 3 OF ATTACU ANALYSIS LOS	TELP	50-1007.
ı. Do	Oxidizer	ectious Sh this profile contain any of th	EQUAL OR EXCEED plosive ock Sensitive le carcinogens which	100%  Radioactive Water Reactive	
m. Do n. Do If y	tification? (list in Section B.1.) es the waste represented by t es the waste represented by t es	this profile contain dioxins? his profile contain asbesto	(list in Section B.1.j).	friable []non-fria	YES ZNO
lfy ts1 p. is1 ifr ifr	es the waste represented by the set of the benze the waste subject to the benze the waste subject to RCRA Subject to RCRA subject to RCRA subject the order the order the waste contain <50 at lie organic concentration	ppm ene waste operations NESH bpart CC controls? rganic LDR Exemption? D ppmw volatile organic (V	IAP?		□YES 20NO □YES 20NO □YES □NO
q. Do	es the waste contain any Clases the waste contain debris?	s I or Class II ozone-deple	ting substances?	********************	PYES DNO
2. Quant	ity of Waste ted Annual Volume		s <u></u> Yards <b>⊠</b> Drums		<del></del>
a. Pa	ng Information ckaging: iulk Solid; Type/Size: <u>3 - 110</u> rum; Type; Size: <u>1 - 8 s</u>	CHELCH	Bulk Liquid Other:	l; Type/Size:	
b. Sh	pping Frequency: Units his a U.S. Department of Tran	4 Per:	Month   Quarter	/ear ⊠One time skip d, e, and f).	□Other □YES XNO



#### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

d	. Reportable Quantity (lbs.;kgs.): e. Hazard Class/ID #:	
1.	USDOT Shipping Name: NON- REGULATED SOLIOS	
9	. Personal Protective Equipment Requirements:	
n	. Transporter/Transfer Station:	
e Ge	nerator's Certification (Please check appropriate responses, sign, and date below.)	
1.	Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2	TYES NO
	a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D, F, K, P, U)	
-	b. If a characteristic hazardous waste, do underlying hazardous constituents (UHCs) apply? (if yes, list in Section B.1.j)	
	(UHCs) apply? (if yes, list in Section B.1.j)	
	Composition - B.1.)	•
_	. <del></del>	
2.	is this a state hazardous waste?	□YES MINO
	Identify ALL state nazardous waste codes	
3.	Is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up?	EYES DNO
	If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site clean-up activity. For state mandated clean-up, provide relevant documentation. MADEP 2165118 3-0	491
		7 / 1
4.	Does the waste represented by this waste profile sheet contain radioactive material, or is disposal	
	regulated by the Nuclear Regulatery Commission?	TAES DENO
5.	Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated	
	Biphenyls (PCBs) reguleted by 40 CFR 761? (if yes, list in Chemical Composition - B.1.j)	TYES DANO
	a. If yes, were the PCBs imported into the U.S.?	
6.	Do the waste profile sheet and all attachments contain true and accurate descriptions of the waste	
<b>U.</b>	material, and has all relevant information within the possession of the Generator regarding known or	
	suspected hazards pertaining to the waste been disclosed to the Contractor?	MEYES □NO
emp:	1869 All Alexandre Link again in March and a file and a file and a file and a file and a file and a file and a	_
7.	Will all changes which occur in the character of the waste be identified by the Generator and disclosed to the Contractor prior to providing the waste to the Contractor?	ØYES □NO
Псие	ck here if a Certificate of Destruction or Disposal is required.	
Any sar	mple submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. I authorize WA	to obtain a
sample	from any waste shipment fer purposes of recertification. If this certification is made by a broker, the undersigned signs as	authorized
agent o	f the generator and has confirmed the information contained in this Profile Sheet from information provided by the general tion as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary pen	or and additional
licenses	s for the waste that has been characterized and identified by this approved profile.	THE MIKE
	101	
(ASIIIG	(Type or Print): <u>ちてにに M ikk。い</u> Company Name: <u>こにい これ Pられずに</u> れ Di 「Check if additional information is attached. Indicate the number of attached pa	ate: 11//57 %
	partieck is additional information is attached. Indicate the number of attached pa	des
D WA	Management's Decision FOR WM U	SE ONI V
1.	Management Method Landfill Non-hazardous Solidification Bioremediation Incinerati	
•	☐Hazardous Stabilization ☐Other (Specify)	
2.	Proposed Ultimate Management Facility:	
3.	Precautions, Special Handling Procedures, or Limitation on Approval:	
4.	Waste Form 5. Source 6. System Type	
	Waste Decision	171
38/88D		Disapproved
	erson's Signature: Date:	nisabbloved
Divisio		Disapproved

### COMPOSITE FORM

	Composite ID : E W	71719	*
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#### Waste Stream Technology, Inc. pH in Solid sw-846 9045C

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00 Group Number: 2002-253

Matrix: Solid Units: pH Units

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS71715	A - Composite	NA	4.46	09/28/00
WS71716	B - Composite	NA	7.32	09/28/00
WS71718	D - Composite	NA	7.73	09/28/00
── <b>&gt;</b> WS71719	E - Composite	NA	6.36	09/28/00

# Waste Stream Technology, Inc. Ignitability (flash point) SW-846 1010

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00

Group Number: 2002-253

Matrix: Solid Value of the Units: \* F

WSTID	Client ID	Detection Limit_	Result	Date Analyzed
WS71715	A - Composite	NA	127	09/27/00
WS71716	B - Composite	NA .	>200	09/27/00
WS71718	D - Composite	NA	>200	09/27/00
WS71719	E - Composite	. NA	>200	09/27/00

#### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00 Group Number: 2002-253

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS71715	A - Composite	40.0	Not detected	09/29/00
WS71716	B - Composite	40.0	Not detected	09/29/00
WS71718	D - Composite	40.0	Not detected	09/29/00
<b>&gt;</b> WS71719	E - Composite	40.0	Not detected	09/29/00

#### Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00

Group Number: 2002-253

Matrix: Solid Units: mg/Kg

WSTID	Client ID	Detection Limit	Result	Date Analyzed
WS71715	A - Composite	40.0	118	09/29/00
WS71716	B - Composite	40.0	81.8	09/29/00
WS71718	D - Composite	40.0	118	09/29/00
→ WS71719	E - Composite	40.0	40.9	09/29/00

### Waste Stream Technology, Inc. PCBs in Soil SW-846 8082

Site: Ofin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00

Group Number: 2002-253

Units: mg/Kg

Matrix: Solid

WST ID: WS71719

Client ID: E - Composite Extraction Date: 09/28/00

Date Analyzed: 09/29/00

Compound	Detection Limit	Result -	QC Limits (%)	Qualifier
aroclor 1016	0.05	Not detected		U
aroclor 1221	0.04	Not detected		U
aroclor 1232	0.06	Not detected	<b>'</b> ,	υ
aroclor 1242	0.03	Not detected		υ
aroclor 1248	0.02	Not detected		υ
aroclor 1254	0.01	Not detected		υ
aroclor 1260	0.01	Not detected		υ
Decachlorobiphenyl (%)		31	60-150	#
Tetrachloro-m-xylene (%)		27	60- 150	#

#### Waste Stream Technology, Inc. TCLP Metals Analysis Result Report

Site: Olin - Drum Phase Date Sampled: 09/25/00

Group Number: 2002-253

Units: mg/L
Matrix: TCLP Extr ::

TCLP Extraction Date: 09/27/00

Date Received: 09/26/00

WST ID: WS71719 Client ID: E - Composite

Digestion Date: 10/02/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	0.045	Not detected	10/02/00	SW-846 6010
Barium by ICP	0.025	0.078	10/02/00	SW-846 6010
Cadmium by ICP	0.025	Not detected	10/02/00	SW-846 6010
Chromium by ICP	0.025	Not detected	10/02/00	SW-846 6010
Copper by ICP	0.045	0.204	10/02/00	SW-846 6010
Lead by ICP	0. <b>075</b>	Not detected	10/02/00	SW-846 6010
Mercury by Cold Vapor	0.001	Not detected	10/03/00	SW-846 7470
Nickel by ICP	0.025	0.026	10/02/00	SW-846 6010
Selenium by ICP	0.095	Not detected	10/02/00	SW-846 6010
Silver by ICP	0.025	Not detected	10/02/00	SW-846 6010
Zinc by ICP	0. <b>0</b> 65	0.304	10/02/00	SW-846 6010

#### Waste Stream Technology, Inc. Herbicides in TCLP Extract 1311/8150

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00

TCLP Extraction Date: 09/27/00

Group Number: 2002-253

Units: mg/L Matrix: TCLP Extrac

WST ID: WS71719 Client ID: E - Composite

Extraction Date: 09/28/00 Date Analyzed: 09/29/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
2,4-D	0.02	. Not detected		U
2,4,5-TP (Silvex)	0.02	Not detected		U A
2,4-DCPAA (%)	,	. 82	10-127	

#### Waste Stream Technology, Inc. TCLP Pesticide Analysis 1311/8081

Site: Olin - Drum Phase Date Sampled: 09/25/00

Date Received: 09/26/00

TCLP Extraction Date: 09/27/00

Group Number: 2002-253

Units: µg/L Matrix: TCLP Extr. t

WST ID: WS71719

Client ID: E - Composite

Extraction Date: 10/02/00

Date Analyzed: 10/04/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chlordane	0.350	Not detected		U
endrin	0.055	Not detected	<b>,</b>	U
gamma-BHC (Lindane)	0.016	Not detected		U
heptachlor	0.097	Not detected		U
heptachlor epoxide	0.042	Not detected		U
methoxychlor	0.031	Not detected		U
toxaphene	1.540	Not detected		U
Tetrachloro-m-xylene (%)		57	60-150	#
Decachlorobiphenyl (%)		70	<b>60-</b> 150	

#### Waste Stream Technology, Inc. 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 09/25/00

Date Received: 09/26/00

TCLP Extraction Date: 09/27/00

Group Number: 2002-253

Units: µg/L

Matrix: TCLP Extrac

WST ID: WS71719

Client ID: E - Composite

Extraction Date: 09/26/00 Date Analyzed: 09/29/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
pyridine	10	Not detected		U
1,4-dichlorobenzene	10	Not detected	•	U
Total cresols(o,m & p)	30	105		
nitrobenzene	10	Not detected		U
hexachloroethane	10	Not detected		U
hexachlorobutadiene	10	Not detected	•	U
2,4,6-trichlorophenol	10	Not detected		U
2,4,5-trichlorophenol	10	Not detected		U
2,4-dinitrotoluene	10	Not detected		U
nexachlorobenzene	10	Not detected		U ,
pentachlorophenol	50	Not detected		U
?-Fluoroph <b>enol (%)</b>		40	21-100	
Phenol-d6 (%)		30	10-94	
Nitrobenzene-d5 (%)		86	35-114	
?-Fluorobiphenyl (%)		81	43-116	
2,4,6-Tribromophenol (%)		112	10-123	
Terphenyl-d14 (%)		85	33-141	

## Waste Stream Technology, Inc. TCLP Volatile Organics Analysis 1311/8260B

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00 Group Number: 2002-253

Units: µg/L

Matrix: TCLP Extr. 1

WST ID: WS71719 Client ID: E - Composite

TCLP Date: 10/04/00 Date Analyzed: 10/05/00

Compound	Detection Limit	Result -	QC Limits (%)	Qualifier
vinyl chloride	100	Not detected	*****	
1,1-dichloroethene	50	Not detected		
chloroform	50	Not detected	•	
2-butanone	1000	Not detected		
1,2-dichloroethane	50	Not detected		
carbon tetrachloride	50	Not detected		
trichloroethene	50	Not detected		
penzene	50	Not detected		
etrachloroethene	50	Not detected		
chlorobenzene	50	Not detected		
1,4-dichlorobenzene	50	Not detected		
I,2-Dichloroethane-d4 (%)		90	70-121	
Foluene-d8 (%)		88	81-117	
Bromofluorobenzene (%)		92	74-121	

**Dilution Factor** 

4



#### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

Service Agreement on File? YYES  Hazardous Non-Hazardous  A. Waste Generator Information	NO TSCA	Profile Number: Wi Renewal Date:	(CN6887
1. Generator Name: SCIN CO 3. Facility Street Address: 51 FM 5. Facility City: WILMING 7. Zip/Postal Code: 01887 9. County: 11. Customer Name: OCIN C	716 Composite  Rum Romanue	Phone: (978)658- State/Province: 244 Generator USEPA/Federal II State/Province ID#: Customer Phone: (427- Customer Fax: 427-	
c. Color d. Strong odor (describe):	e. Physical state @ : ⊠Solid □Liqu	ıid ⊠Single Layer	g. Free liquid range to % h. pH: Range to 7.32 %
j. Chemical Composition (List all cons	tituents [including halogenated organics, ve analysis):	□140-199°F □≥ 200°F debris, and UHC's) present in any cond	Not applicable antration and aubmit  Concentration Range
k. Oxidizer Pyr Carcinogen Infe I. Does the waste represented by the notification? (list in Section B.1.j) m. Does the waste represented by the notification of the waste represented by the liftyes.  o. Does the waste represented by the liftyes, concentration is the waste subject to the benze of the waste subject to RCRA Sulfino, does the waste meet the original of the liftyes of the waste contain <50 to Volatile organic concentration.	nis profile contain any of the can his profile contain dioxins? (list his profile contain asbestos?	ve	Tive  TYES MO
Does the waste contain debris? (     Quantity of Waste     Estimated Annual Volume	list in Section B.1.j)	· ]Yards ∰Drums □Other (sp	TYPES NO
3. Shipping information a. Packaging:  Bulk Solid; Type/Size: 2-11  Drum; Type; Size: 2-85 b. Shipping Frequency: Units c. Is this a U.S. Department of Trans	CALL CERPAC  Y Per. Mon	☐Buik Liquid; Type/Size: ☐Other;  th ☐Quarter ☐Year ☑One tin	ne 「Other



### GENERATOR'S WASTE PROFILE SHEET PLEASE PRINT IN INK OR TYPE

	I. Reportable Quant			e. Hazard	Class/ID #:		
f.	. USDOT Shipping I	vame: <u>۸۵۷</u>	REGULATED	SOLIDS			
g	. Personal Protectiv		quirements:				
n	. Transporter/Trans	rer Station:					
C. Ge	enerator's Certificat	ion (Please chec	k appropriate respons	es, sign, and dat	e below.)		
1.	is this a LISEPA has	ramous waste (40 C	CFR Part 261)? If the ans	bvarie na ekinta 2			CVCC PNO
**	a. If yes, identify	ALL USEPA listed r	and characteristic waste o	ode numbers (D. F	KPU	***********************	TYES KINO
•			•				
	b. If a characterist	ic hazardous waste	, do underlying hazardou	s constituents	· · · · · · · · · · · · · · · · · · ·	·	
	(UHCs) apply?	(If yes, list in Section	n B.1.))	*******************		□YES □NO	
			yes, list aize and type in				
		~ · · · · · · · · · · · · · · · · · · ·	****** ************************	4 \$ 6 \$ 4 \$ 4 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	**********	□YES □NO	
2.	Is this a state hazard	ous waste?	*******			*****	□YES MO
	Identify ALL state ha	zardous waste cod	<b>es</b>				
_							
3.	la the waste from a C	ERCLA (40 CFR 30	00, Appendix B) or state n	nandated clean-up?	) 	***************	ZYES   NO
	activity. For state ma	or Decision (ROD), Indated clean-un in	104/106 or 122 order or or ovide relevant document	court order that gov	ems site clear	n-up a.t. a.u.e.	
				•		W. 03-0431	
4.	Does the waste repre-	sented by this wast	e profile aheet contain rac	dioactive material, d	or is disposal		
	regulated by the Nuck	aar Regulatory Com	mission?	**************	* ** ** ** ** * * * * * * * * * * * * *		TYES MO
5.	Does the waste reone	sented by this wast	s profile sheet contain co	ncentrations of Pob	vehiorianted		
	Biphenyls (PCBs) reg	ulated by 40 CFR 7	61? (if yes, list in Chemic	al Composition - B	1.1)	******	TYES MO
•	a. If yes, were the PC	:Bs imported into th	e U.S.7		*******	□YES □NO	<b>————</b>
e	Do the weeks made a						
6.	material and has all n	neet and all attacht elevant information	nents contain true and ac within the possession of	curate descriptions	of the waste		•
	suspected hazards pe	rtaining to the wast	e been disclosed to the C	Contractor?	roniĝ known c		RYES DNO
					•		W, ()
7.	Will all changes which	occur in the chara	cter of the waste be ident	ified by the Genera	tor and disclo	sed	
	to the Contractor prior	to browning the Ma	iste to the Contractor?	********************	******	********************	GYES □NO
□Che	ck here if a Certificate	e of Destruction o	r Disposal is required.	•			
Anv sar	noie submitted is repres	sentativa as definec	in 40 CFR 261 - Append	liv l ar hv unina an i	antimient ma	thad for the wine 1888	
sample	from any waste shipme	int for purposes of r	ecertification. If this certi	fication is made by	a broker, the	undersioned sions as	authorized
agent o	f the generator and has	confirmed the infor	mation contained in this !	Profile Sheet from it	nformation pro	wided by the nenerate	r and additional
liconas	tion as it has determine for the weste that has	d to be reasonably	necessary. If approved for and identified by this app	ormanagement, Co	ontractor has a	all the necessary pem	nits and
		# Fair		proved prome.			******
	ation Signature:		Many		Title: PRI	LEINHE ENG	, 5 Pec/4 L
Name	(Type or Print):	'stave	MUNRO Compa	ny Name: 💍	IN Cu	RPGRATTONDE	te: 11//c/2
		∰Check if	additional information	is attached. Indic	ate the num	ber of attached pag	Jes TT
n ww	l Management's Dei	rision	What is a supplementable of the supplementab				
1.	Management Meth		Non-hazardous Soi	idification C	Bioremediation	FOR WM US	"Mary March Charles of March 18 and January and Artist
•••		☐Hazardous S		sr (Specify)	)Of Cit icaletic	Ni Miranan	<sup>91</sup>
2.	Proposed Ultimate			(""	***************************************		
3.			edures, or Limitation or	n Approval:			
	-	-		-			
4.	Waste Form		5. Source		Δ	Carton T.	
	Waste Decision				6.	System Type	liganomical
	erson's Signature:	·		*************************	······	Approvedl Date:	Disapproved
	n Approval Signature	(Optional):				Date:	
	Waste Approvais Pe					)ate:	
					<u> </u>	/u.v.	

### COMPOSITE FORM

Composite ID: B W571716

CLIENT ID	Grams 125 -
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079	126
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# Waste Stream Technology, Inc. Ignitability (flash point) SW-846 1010

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00 Group Number: 2002-253

Matrix: Solid Units: \* F

WSTID	Client ID	Detection Limit	Result	Date Analyzed
W\$71715	A - Composite	. NA	127	09/27/00
<del>&gt;</del> WS71716	B - Composite	. NA	>200	09/27/00
WS71718	D - Composite	NA	>200	09 <i>1</i> 27/00
WS71719	E - Composite	NA NA	>200	09/27/00

#### Waste Stream Technology, Inc. pH in Solid sw-846 9045C

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00

Group Number: 2002-253

Matrix: Solid Units: pH Units

			•	
	•			
WSTID	Client ID	Detection Limit_	Result	Date Analyzed

A421 ID	Gilettin	·	Desertion Finis	Vezair	Date Analyzed
WS71715	A - Composite		NA NA	4.46	09/28/00
—→WS71716	B - Composite		NA	7.32	09/28/00
WS71718	D - Composite		NA	7.73	09/28/00
WS71719	E - Composite	•	NA	6.36	09/28/00

#### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00

Group Number: 2002-253

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS71715	A - Composite	40.0	Not detected	09/29/00
→WS71716	B - Composite	40.0	Not detected	09/29/00
WS71718	D - Composite	40.0	Not detected	09/29/00
WS71719	E - Composite	40.0	Not detected	09/29/00

#### Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00 Group Number: 2002-253

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS71715	A - Composite	40.0	118	09/29/00
─>WS71716	B - Composite	40.0	81.8	09/29/00
WS71718	D - Composite	40.0	118	09/29/00
WS71719	E - Composite	40.0	40.9	09/29/00

### Waste Stream Technology, Inc. PCBs in Soil SW-846 8082

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00 Group Number: 2002-253

Units: mg/Kg Matrix: Solid

WST ID: WS71716 Client ID: B - Composite

Extraction Date: 09/28/00 Date Analyzed: 09/29/00

Compound	Detection Limit	Result -	QC Limits (%)	Qualifier
aroclor 1016	0.05	Not detected		U
aroclor 1221	0.04	Not detected		U
arocior 1232	0.06	Not detected		U
aroclor 1242	0.03	Not detected		U
arocior 1248	0.02	Not detected		U
aroclor 1254	0.01	Not detected		Ų
arocior 1260	0.01	Not detected		· U
Decachlorobiphenyl (%)	•	74	60-150	
Tetrachloro-m-xylene (%)		72	60-150	

#### Waste Stream Technology, Inc. **TCLP Metals Analysis Result Report**

Site: Olin - Drum Phase

Group Number: 2002-253

Units: mg/L Matrix: TCLP Extract

TCLP Extraction Date: 09/27/00

Date Sampled: 09/25/00 Date Received: 09/26/00

> WST ID: WS71716 Client ID: B - Composite Digestion Date: 10/02/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	0.045	Not detected	10/02/00	SW-846 6010
Barium by ICP	0.025	0.119	10/02/00	SW-846 6010
Cadmium by ICP	0.025	Not detected	10/02/00	SW-846 6010
Chromium by ICP	0.025	Not detected	10/02/00	SW-846 6010
Copper by ICP	0.045	0.660	10/02/00	SW-846 6010
Lead by ICP	0.075	0.184	10/02/00	SW-846 6010
Mercury by Cold Vapor	- 0.001	Not detected	10/03/00	SW-846 7470
lickel by ICP	0.025	-Not detected	10/02/00	SW-846 6010
Selenium by ICP	0.095	Not detected	10/02/00	SW-846 6010
Silver by ICP	0.025	Not detected	10/02/00	SW-846 6010
Zinc by ICP	0.065	2.10	10/02/00	SW-846 6010

### Waste Stream Technology, Inc. Herbicides in TCLP Extract 1311/8150

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00

TCLP Extraction Date: 09/27/00

Group Number: 2002-253

Units: mg/L

Matrix: TCLP Ext. c

WST ID: WS71716

Client ID: B - Composite

Extraction Date: 09/28/00 Date Analyzed: 09/29/00

		Qualifier
. Not detected		U
Not detected	0	U
77	10- 127	
		Not detected

### Waste Stream Technology, Inc. TCLP Pesticide Analysis 1311/8081

Site: Olin - Drum Phase

Date Sampled: 09/25/00 Date Received: 09/26/00

TCLP Extraction Date: 09/27/00

Group Number: 2002-253

Units: µg/L Matrix: TCLP Extract

WST ID: WS71716 Client ID: B - Composite

Extraction Date: 10/02/00 Date Analyzed: 10/04/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chlordane	0.350	Not detected		U
endrin	0.055	Not detected	***	U
gamma-BHC (Lindane)	0.016	Not detected		Ü
heptachlor	0.097	Not detected		U
heptachlor epoxide	0.042	Not detected		U
methoxychior	0.031	Not detected		U
toxaphene	1.540	Not detected	•	Ü
Tetrachioro-m-xyiene (%)		56	60- 150	#
Decachlorobiphenyl (%)		67	60- 150	

### Waste Stream Technology, Inc. 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00

TCLP Extraction Date: 09/27/00

Group Number: 2002-253

Units: µg/L

Matrix: TCLP Extra t

WST ID: WS71716

Client ID: B - Composite

Extraction Date: 09/26/00 Date Analyzed: 09/29/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
pyridine	10	Not detected		U
1,4-dichlorobenzene	10	Not detected	,	U
Total cresols(o,m & p)	30	Not detected		U
nitrobenzene	10	Not detected		U
hexachloroethane	10	Not detected		U
hexachlorobutadiene	10	Not detected		U
2,4,6-trichlorophenol	10	Not detected	· 	U
2,4,5-trichlorophenol	10	Not detected		U
2,4-dinitrotoluene	10	Not detected		U
exachlorobenzene	10	Not detected		U .
entachlorophenol	50	Not detected		υ
2-Fluorophenol (%)		45	21-100	
Phenol-d6 (%)		30	10-94	
vitrobenzene-d5 (%)	•	88	35-114	
-Fluorobiphenyl (%)	e e	93	43-116	
2,4,6-Tribromophenol (%)		118	10-123	
erphenyl-d14 (%)		91	33-141	

### Waste Stream Technology, Inc. TCLP Volatile Organics Analysis 1311/8260B

Site: Olin - Drum Phase Date Sampled: 09/25/00

Group Number: 2002-253

Units: µg/L

Matrix: TCLP Extract

Date Received: 09/26/00

WST ID: WS71716
Client ID: B - Composite

TCLP Date: 10/02/00 Date Analyzed: 10/03/00

Compound	Detection Limit	Result .	. QC Limits (%)	Qualifier
vinyl chloride	100	Not detected		U
1,1-dichloroethene	50	Not detected		U
chloroform	50	Not detected		U
2-butanone	1000	Not detected	•	U
1,2-dichloroethane	50	Not detected		U
carbon tetrachloride	50	Not detected		U
trichloroethene	50	Not detected		U
penzene ·	50	Not detected	**************************************	U
etrachloroethene	50	Not detected		U
chlorobenzene	50	Not detected		U
1,4-dichlorobenzerie	50	Not detected		U.
,2-Dichloroethane-d4 (%)		102	70-121	
Foluene-d8 (%)	•	90	81-117	
Bromofluorobenzene (%)		99	74-121	

Dilution Factor

WASTE STREAM



GENERATOR'S WASTE PROFILE SHEET
PLEASE PRINT IN INK OR TYPE

Hazardous Non-Hazardous   TSCA   Renewal Date:   /     A. Waste Generator Information   Color Carponarion   olor Carponario   Color Carponario		vice Agreement on File? XYES		DK I I PE	Profile Number:	www <u>CK</u>	7 2111
1. Generator Name:			]TSCA		Renewal Date:		/ /
3. Facility Street Address: 51 ** ********************************	Α.	Waste Generator Information	·	<u>an Indiana and an an an an an an an an an an an an an </u>	G.	<u> </u>	en en en en en en en en en en en en en e
9. Facility Struct Address: S1 の Provers 37	1.	Generator Name: ひしゃ と	RPUNATION	2. SIC	Code: <i>५९५१</i>		
7. ZipPostal Code:	3.	4,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		WM-		8 - 6121	
19. State/Province ID 表  11. Customer Name:	5.	Facility City: LILMINGTO	, pu				
10. State/Province ID 表	7.	Zip/Postal Code: 01887		8. Gene	erator USEPA/Feder	al ID #: MAC	rolloylog
13. Customer Contact: \$7000 pm a Release 14. Customer Fax: \$23.776.4(ff) 15. Billing Address	9.	**************************************	·	_ 10. Stati	e/Province ID #:		
15. Billing Address							
E. Waste Stream Information			Merkeu	_ 14. Cust	tomer Fax:u		
1. Description a. Name of Waste: LS 77651 Comm page of Process Generating Waste: Drum Reflective L  DRUM \$ 90,97,11,144,102,163  C. Color d. Strong odor (describe): PSolid Liquid Reflective (describe): Reflective Color Color Color Color (describe): Reflective Color Colo				(O	(c)	<u>/</u> 45	ame as above
a. Name of Waste: LS 71651 Cam page 170 B b. Process Generating Waste: DRUM ROYALDE LS  C. Color d. Strong odor (describe): Solid   Lquid   Lquid   Single Layer   10				· · · · · · · · · · · · · · · · · · ·		<u> </u>	<u> </u>
b. Process Generating Wasts: DRUM REPARENT L  DRUM 1 90,97, 11, 144, 102, 163  C. Color   d. Strong odor   e. Physical state @ 70°F   f. Layers   g. Free liquid range   f. Layers   g. Single Layer   f. Layers   g. Single Layer   f. Layers   g. Single Layer   f. Layers   g. Single Layer   f. Multi-layer   f. Layers   g. Single Layer   f. Layers   g. Single Layer   f. Layers   g. Single Layer   f. Layers   f. Layers   g. Single Layer   f. Layers   f. Layers   g. Single Layer   f. Layers   f. Layers   g. Single Layer   f. Layers   f. Layers   f. Layers   g. Single Layer   f. Layers   f. Layers   f. Layers   f. Layers   f. Layers   f. Layers   g. Single Layer   f. Layers	٦.		~ 1	- a			
DRUP ▼ 90,97,11, I44, 102, 163  C. Color (describe):				<u> </u>			
C. Color    Result   Color		D. FIOODS Ceronaling Tractic.	NAOW KOMEROWE				
C. Color    Result   Color		Drug + 90.97 11	YY 102 168				***************************************
Resulting   Case   Ca		<u> </u>			-		
Resulting   Case   Ca		c. Color d. Strong od	or e. Physical state	e @ 70°F	f. Layers	g. Free	liquid range
Gas   Studge   Multi-layer   h. pH: Range to 7.07 %					•		
Constituents   Concentration Range   Constituents   Concentration   Constituents   Concentration   Constituents   Concentration   Constituents   Concentration   Constituents   Concentration   Constituents   Constituents   Constituents   Concentration   Constituents   C			c#4 □Gas □	]Sludge	☐Multi-layer		i
L. Liquid Flash Point: □ <a href="https://www.ncbiton.com/representative analysis">L. Liquid Flash Point: □<a href="https://www.ncbiton.com/representative analysis">L. Constituents (Including halogenessed organics, debris, and UHC's) present in any concentration and submit representative analysis):    Constituents</a></a>						h. pH: F	lange
j. Chemical Composition (List at constituents [including halogensited organics, debtia, and UHC's] present in any concentration and submit representative analysis):    Constituents							to 7.07 %
j. Chemical Composition (List at constituents [including halogenated organics, debris, and UHC's] present in any concentration and submit representative analysis):    Constituents		I Liquid Flash Point: □<73°F	□73-99°F □100-139°f	= (**140-*	199°F ⊏> 200°	F FNot at	policable
Constituents    Constituents   Concentration Range   Constituents   Concentration Range   Repetitive   Succession   Concentration Range   Repetitive   Succession   Concentration   Range   Repetitive   Succession   Concentration   Range   Repetitive   Succession   Concentration   Range   Repetitive   Succession   Concentration   Range   Repetitive   Concentration							
Repetitude   Succided   Succide							
Repetitude   Succided   Color   Setting   Se		Canadia	I Consentration Dange	II Constitues	-60 ·	1 Cosoo	atration Danga
CHASH   POINT   106 ° C   SOLIDS   SO			•			1	- 1
CHAIN &   O -   O			106°E				
CRESOC   D- 2.15   PF		<del></del>					
k.   Oxidizer   Pyrophoric   Explosive   Radioactive   Vater Reactive			The second of th				
Carcinogen	4					<u> </u>	
Carcinogen		L □Ovidizar □P	vrophoric OFs	mloeiva	—————————————————————————————————————	etin va	
I. Does the waste represented by this profile contain any of the cercinogens which require OSHA notification? (list in Section B.1.j)							
notification? (list in Section B.1.j)							
m. Does the waste represented by this profile contain dioxins? (list in Section B.1.)		•					MYES KINO
if yes		m. Does the waste represented by	this profile contain dioxins?	' (list in Secti	ion B.1.])		
o. Does the waste represented by this profile contain benzene?  If yes, concentration ppm  Is the waste subject to the benzene waste operations NESHAP?							TYES VINO
If yes, concentration ppm  s the waste subject to the benzene waste operations NESHAP?							
Is the waste subject to the benzene waste operations NESHAP?				∍?		*****	TYES MINC
p. Is the waste subject to RCRA Subpart CC controls?				1450			
If yes, volatile organic concentration ppmw  q. Does the waste contain any Class I or Class II ozone-depleting substances?		n le the weste subject to DCDA S	ene waste operations ra⊏o: ∷ibbact CC controle?	MAP (	40,99,9,9,0,000,000,000,000,000,000,000,	**********	
q. Does the waste contain any Class I or Class II ozone-depleting substances?  r. Does the waste contain debris? (list in Section B.1.)  2. Quantity of Waste  Estimated Annual Volume  5					**************************************		Clies Miss
r. Does the waste contain debris? (list in Section B.1.))					rese?		LIYES KANO
2. Quantity of Waste Estimated Annual Volume 5 Tons Yards Drums Other (specify)  3. Shipping Information a. Packaging:							
Estimated Annual Volume  S	~		A comment and address of				سا سا
3. Shipping information a. Packaging:	۷.		<b>6</b> ' 1774	70 PMV		- (ana-16-)	
a. Packaging:		Temision White Acidits	<u> </u>	15 LI Yands	Florums Come	г (вреслу)	
	3.			•			
UBUIK SOIID; Type/Size: 2 ~ 116 ⊂ N LL6₩ □BUIK Liquid; Type/Size:							
		TBUIK Solid: Type/Size: 1/2	110 GHLLOW			ze:	
Drum; Type; Size: 3- \$5 GALLOW QUELPHUM, Dother:							
		🔀 Drum; Type; Size: 3 - 🧣 :	S GALLOW OVER PH				
b. Shipping Frequency: Units 5 Per: _Month _Quarter _Year Mone time _Other		🔀 Drum; Type; Size: 3 - 🧣 :	S GALLOW BUCK PA			Inatima CO	thar



### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

C	I. Reportable Quantity (lbs.; kgs.):e. Hazard Class/ID#:	
f		PEIL
٤	p. Personal Protective Equipment Requiraments:	
ŀ	n. Transporter/Transfer Station:	
C. G	enerator's Certification (Please check appropriate responses, sign, and date below.)	) o
***************************************		A contract to the contract of
1.	Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2	TAES BENO
	b. If a characteristic hazardous waste, do underlying hazardous constituents  (UHCs) apply? (if yes, list in Section B.1.)	
	Composition - B.1.)	
2.	is this 2 state hezardous waste?	TYES ZNO
	Identify ALL state hazardous waste codes	C
<b>3.</b>	is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up?	SEYES □NO
	·	
4.	Does the waste represented by this waste profile sheet contain radioactive material, or is disposal regulated by the Nuclear Regulatory Commission?	
		□YES BINO
5.	Does the waste represented by this waste profile sheet contain concentrations of Polychiorinated	
	Biphenyls (PCBs) regulated by 40 CFR 7617 (if yes, list in Chemical Composition - B.1.j)	□YES MO
,	a. If yes, were the PCBs imported into the U.S.?	
6.	Do the waste profile sheet and all attachments contain true and accurate descriptions of the waste material, and has all relevant information within the possession of the Generator regarding known or suspected hazards pertaining to the waste been disclosed to the Contractor?	KIYES []NO
7.	Will all changes which occur in the character of the waste be identified by the Generator and disclosed	
	to the Contractor prior to providing the waste to the Contractor?	MYES DNO
CChe	ck here if a Certificate of Destruction or Disposal is required.	
	·	
sample agent o informa	mple aubmitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. I authorize Wifrom any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs a fithe generator and has confirmed the information contained in this Profile Sheet from information provided by the generation as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary per is for the waste that has been characterized and identified by this approved profile.	s authorized
Certific	ration Signature: Title: PRINCIPAL CAU.	S 10 AF 1 1 1 2 5 5
	The sa Disk.	ate: 11/14/2
	Check if additional information is attached. Indicate the number of attached page 1	iges 71
D. WA	Il Management's Decision FOR W	na use svi v
1.	Management Method	MI USE ONLY
	☐Hazardous Stabilization ☐Other (Specify)	IW11
2.	Proposed Ultimate Management Facility:	
3.	Precautions, Special Handling Proceduras, or Limitation on Approval:	
_		
4.	Waste Form 5. Source 6. System Type	
		Disapproved
•	erson's Signature: Date:	
	n Approval Signature (Optional):  Date:	
Shacin	l Waste Approvals Person Signature: Date:	

### COMPOSITE FORM

Composite ID: B W 5 71651

CLIENT ID	Grams
093	100 -
097	100
011	160
144	100
102	100
	Tioqus
163	100 100
	Com con.
*	
	- RO RESINO
(VA Pio	A STEEL WAS

### Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00 Group Number: 2002-251

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS71650	A - Composite	40.0	134	09/29/00
WS71651	B - Composite	40.0	105	09/29/00
WS71652	C - Composite	40.0	81.0	09/29/00

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### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00 Group Number: 2002-251

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS71650	A - Composite	40.0	Not detected	09/29/00
→ws71651	B - Composite	40.0	Not detected	09/29/00
WS71652	C - Composite	40.0	Not detected	09/29/00

### Waste Stream Technology, Inc. pH in Solid sw-846 9045C

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00 Group Number: 2002-251

Matrix: Solid Units: pH Units

WST ID	Client ID		Detec	tion Li	mit	Result	Date Analyzed
W\$71650	A - Composite	•	•	NA:	-	7.74	09/28/00
→> WS71651	B - Composite	•		NA		7.07	09/28/00
WS71652	C - Composite			NA		4.17	09/28/00

# Waste Stream Technology, Inc. Ignitability (flash point) SW-846 1010

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00

Group Number: 2002-251

Matrix: Solid Units: \* F

WSTID	Client ID	Detection Limit	Result	Date Analyzed
WS71650	A - Composite	NA "	131	09/27/00
— <del>&gt;</del> -WS71651	B - Composite	NA	106	09/27/00
WS71652	C - Composite	NA	102	09/27/00

# Waste Stream Technology, Inc. PCBs in Soil SW-846 8082

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00 Group Number: 2002-251

Units: mg/Kg Matrix: Solid

WST ID: WS71651 Client ID: B - Composite

Extraction Date: 09/28/00 Date Analyzed: 09/29/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
aroclor 1016	0.200	Not detected	·	U
aroclor 1221	0.160	Not detected	·	U
aroclor 1232	0.240	Not detected		U
arocior 1242	0.120	Not detected		U
aroclor 1248	0.080	Not detected		U
aroclor 1254	0.040	Not detected		U
aroclor 1260	0.040	Not detected		U
Decachlorobiphenyl (%)		27	<b>60-</b> 150	#
Tetrachloro-m-xylene (%)		26	60-150	#

## Waste Stream Technology, Inc. TCLP Metals Analysis Result Report

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00 Group Number: 2002-251

Units: mg/L

Matrix: TCLP Extra

TCLP Extraction Date: 09/27/00

WST ID: WS71651 Client ID: B - Composite

Digestion Date: 10/02/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	0.045	Not detected	10/02/00	SW-846 6010
Barium by ICP	0.025	0.055	10/02/00	SW-846 6010
Cadmium by ICP	0.025	Not detected	10/02/00	SW-846 6010
Chromium by ICP	0.025	1.02	10/02/00	SW-846 6010
Copper by ICP	0.045	0.085	10/02/00	SW-846 6010
Lead by ICP	0.075	Not detected	10/02/00	SW-846 6010
Mercury by Cold Vapor	0.001	Not detected	09/28/00	SW-846 7470
Nickel by ICP	0.025	Not detected	10/02/00	<sup></sup> SW-846 6010
Selenium by ICP	0.095	Not detected	10/02/00	SW-846 6010
Silver by ICP	0.025	Not detected	10/02/00	SW-846 6010
Zinc by ICP	0.065	9.61	10/02/00	SW-846 6010

## Waste Stream Technology, Inc. TCLP Pesticide Analysis 1311/8081

Site: Olin - Drum Phase

Date Sampled: 09/22/00

Date Received: 09/25/00

TCLP Extraction Date: 09/27/00

Group Number: 2002-251

Units: µg/L

Matrix: TCLP Extract

WST ID: WS71651

Client ID: B - Composite

Extraction Date: 10/02/00 Date Analyzed: 10/04/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chlordane	0.350	Not detected		U
endrin	0.055	Not detected		U
gamma-BHC (Lindane)	0.016	Not detected		U
heptachlor	0.097	Not detected		U
heptachlor epoxide	0.042	Not detected		U
methoxychlor	0.031	Not detected		. n
oxaphene	1.540	Not detected		Ū
Tetrachloro-m-xylene (%)		75	60-150	
Decachlorobiphenyl (%)	,	81	60-150	

### Waste Stream Technology, Inc. Herbicides in TCLP Extract 1311/8150

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00

TCLP Extraction Date: 09/27/00

Group Number: 2002-251

Units: mg/L

Matrix: TCLP Extr it

WST ID: WS71651

Client ID: B - Composite Extraction Date: 09/28/00 Date Analyzed: 09/29/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
2,4-D	0.02	Not detected		U
2,4,5-TP (Silvex)	0.02	Not detected	•	Ū
2,4-DCPAA (%)		. 117	<b>1</b> 0- 127	<del>_</del>

## Waste Stream Technology, Inc. 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00

TCLP Extraction Date: 09/27/00

Group Number: 2002-251 Units/ µg/L,

Matrix TGLP Extra

WST ID: WS71651 Client ID: B - Composite Extraction Date: 09/26/00

Date Analyzed: 09/29/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
pyridine	10	Not detected		Ü
1,4-dichlorobenzene	10	Not detected		U
Total cresols(o,m & p)	30	. 215 Te	LP 200	
nitrobenzene	10	Not detected		U
hexachloroethane	10	Not detected		U
hexachlorobutadiene	10	Not detected		U
2,4,6-trichlorophenol	10	Not detected		U
2,4,5-trichlorophenol	10	Not detected		U
2,4-dinitrotoluene	10	Not detected		U
nexachlorobenzene	10	Not detected		U ·
pentachlorophenol	50	Not detected		U
2-Fluorophenol (%)		41	21-100	
Phenol-d6 (%)		22	10-94	
Nitrobenzene-d5 (%)		91	35-114	
?-Fluorobiphenyl (%)		87	· 43-116	
2,4,6-Tribromophenol (%)		107	10-123	
Terphenyl-d14 (%)		94	33-141	

**Dilution Factor** 

4

### Waste Stream Technology, Inc. TCLP Volatile Organics Analysis 1311/8260B

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00

Group Number: 2002-251

Units: µg/L Matrix: TCLP Extr. t

WST ID: WS71651 Client ID: B - Composite

TCLP Date: 09/29/00 Date Analyzed: 10/02/00

Compound	Detection Limit	Result :	QC Limits (%)	Qualifier
vinyl chloride	100	Not detected	······································	U
1,1-dichloroethene	50	Not detected	,	U
chloroform	50	Not detected		U
2-butanone	1000	Not detected		U
1,2-dichloroethane	50	Not detected		U
carbon tetrachloride	50	Not detected		U
trichloroethene	50	Not detected		U
benzene	50	Not detected		U
tetrachioroethene	50	Not detected		υ
chlorobenzene	50	Not detected		Ū
1,4-dichlorobenzene	50	Not detected		U ·
1,2-Dichloroethane-d4 (%)		96	70-121	
Foluene-d8 (%)	•	94	81-117	
3romofluorobenzene (%)		97	74-121	



### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

		]no ]tsca		ofile Number: WMI newal Date:	<u>CN</u> 6874
1. 3. 5. 7. 9. 11. 13.	Facility Street Address: 51 F Facility City: LILMINGTO Zip/Postal Code: 01387 County: Customer Name: OLIN C Customer Contact: 57506 Billing Address Waste Stream Information Description	COLPORATION  THES ST  OR PORATION  MORROW  RESIRS & JOL  DRUM 5 x CAUC	4. Phone: ( 6. State/Provit 8. Generator U 10. State/Provit 12. Customer I 14. Customer I	JSEPA/Federal ID nce ID #:	#: <u>MAD 00 14 0 310 4</u> 5) 336 - 4511
	DRUM & 99, 104  129, 15  c. Color  BROWN & 99, 104  d. Strong odd (describe):  CHEMIC  i. Liquid Flash Point: []<73°F	e. Physical stat	e @ 70°F   f. Lay ]Liquid   ⊠S ]Sludge   ∏M	ers g ingle Layer fulti-layer	153 154, 170 p. Free liquid range to 5 % 1. pH: Range 2.82 to %
	j. Chemical Composition (List all conference)  Constituents  PENCYLES SULFIDE  FURSH POINT  TOTAL CRESULS  CHOMIUM	stituents (including halogenated on tive analysis):  Concentration Range  42.3 PFM  III FF  6-128 FFL  0-0.028 PFM		i) present in any concent の	Concentration Range の - 5 o 7。
•	k. Oxidizer Py Carcinogen Inf Does the waste represented by notification? (list in Section B.1.j m. Does the waste represented by n. Does the waste represented by if yes.  Does the waste represented by if yes, concentration Is the waste subject to the benze p. Is the waste subject to RCRA Su if no, does the waste meet the o if no, does the waste contain <50 Volatile organic concentration  q. Does the waste contain any Class	AL COMPOSITION MUST rophoric	EQUAL OR EXCEING Plosive nock Sensitive ne carcinogens which is consisted the carcinogens which is consisted the carcinogens which is consisted the carcinogens which is consisted the carcinogens which is consisted the carcinogens which is consisted to carcinogens which is	D 100%  Radioactive Water Reactive require OSHA  j)	
2.	<ul><li>r. Does the waste contain debris?</li><li>Quantity of Waste</li><li>Estimated Annual Volume</li></ul>		ns ∐Yards ⊠Dru		RYES NO
3.	Shipping Information  a. Packaging:  Bulk Solid; Type/Size 1104  Drum; Type; Size 568  b. Shipping Frequency: Units  c. Is this a U.S. Department of Trans	- Lew Per	⊟Bulk Liqı ⊟Other: ]Month	uid; Type/Size:	Clother



### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

d	Reportable Quantity (lbs.;kgs.): e. Hazard Class/ID #:	
f.		PGIL
4.5	. Personal Protective Equipment Requirements:	
h.	. Transporter/Transfer Station:	
മ ദ്രം	nerator's Certification (Please check appropriate responses, sign, and date below.)	
-1.	Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2	□YES (\$\frac{1}{2}NO
	a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D, F, K, P, U)	
	b. If a characteristic hazardous waste, do underlying hazardous constituents	
	(UHCs) apply? (If yes, list in Section B.1.j)	
	c. Does this wasta contain debris? (if yes, list size and type in Chemical	,
	Composition - B.1.)	
2.	is this a state hazardous waste?	TYES MUS
da.	Identify ALL state hazardous waste codes	□YES KINO
_		
3.	is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up?	ØYES □NO
	If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site clean-up	4.5
	activity. For state mandated clean-up, provide relevant documentation. M XDEP, MCP 5172-4 3-0	7//
4.	Does the waste represented by this waste profile sheet contain radioactive material, or is disposal	
	regulated by the Nuclear Regulatory Commission?	TYES MO
5.	Proposition remarks and an arrival to the country margin about another annuality of the best states of	
J.	Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated  Biphenyls (PCBs) regulated by 40 CFR 761? (if yes, list in Chemical Composition - B.1.j)	TYES KINO
	a. If yes, were the PCBs imported into the U.S.?	MICS MINO
,		
6.	Do the waste profile sheet and all attachments contain true and accurate descriptions of the waste	
	material, and has all relevant information within the possession of the Generator regarding known or	
	suspected hazards pertaining to the waste been disclosed to the Contractor?	ØYES □NO
7.	Will all changes which occur in the character of the waste be identified by the Generator and disclosed	
•	to the Contractor prior to providing the waste to the Contractor?	YSYES ONO
	ck here if a Certificate of Destruction or Disposal is required.	
	, in the second of the second	
Any sar	mple submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. I authorize Wi	/I to obtain a
sample	from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs at	s authorized
informat	f the generator and has confirmed the information contained in this Profile Sheet from information provided by the genera tion as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary per	tor and additional
licenses	s for the waste that has been pharacterized and identified by this approved profile.	mrs and
	cation Signature: New More Title: PRINCIPAC CAL	
Name (	(Type or Print): STEUE MAROW Company Name: OLIN CORPORATION D	
	Check if additional information is attached. Indicate the number of attached pa	ges
	Management's Decision FOR WM U	WALL CONTRACTOR OF THE CONTRACTOR
1.	Management Method _Landfill _Non-hazardous Solidification _Bioremediation _Incinerati _Hazardous StabilizationOther (Specify)	on
2.	Hazardous Stabilization Other (Specify)  Proposed Ultimate Management Facility:	
2. 3.	Precautions, Special Handling Procedures, or Limitation on Approval:	
₩.	rioceanone, openarmanny rioceanies, or Emitation on Approvat	
4.	Waste Form 5. Source 6. System Type	
Special		Disapproved
Salesp	erson's Signature: Date:	,
Division	n Approval Signature (Optional): Dete:	
Special	l Waste Approvals Person Signature: Date:	

### Waste Stream Technology, Inc.

302 Grote Street Buffalo, NY 14207 (716) 876-5290

### Analytical Data Report

Group Number: 2002-275

Site: Olin - Drum Phase

### Field and Laboratory Information

		• .	Date	Date	
WST ID	Client ID	Matrix	Sampled	Received	Time
WS72604	Cyanide Solids	Solid	10/16/00	10/16/00	11:00
WS72605	Cyanide & Sulfide Solids	Solid	10/16/00	10/16/00	11:00
WS72606	Sulfide	Solid	10/16/00	10/16/00	11:00
WS72607	Flammable Resins / Solids	Solid	10/16/00	10/16/00	11:00
WS72608	+Cu	Solid	10/16/00	10/16/00	11:00
WS72609	Partially/Slightly H2O sol.Resins&Solids	Solid	10/16/00	10/16/00	11:00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	Solid	10/16/00	10/16/00	11:00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	Solid	10/16/00	10/16/00	11:00
WS72613	Oily Liquid	Oil	10/16/00	10/16/00	11:00
>WS72614	Mixed Resins & Solids	Solid	10/16/00	10/16/00	11:00
WS72615	Water Sol. Liquid	Aqueous	10/16/00	10/16/00	11:00

Nov.29. 2000 9:10AM

SEVENSON EAM TECH

## Waste Stream Technology, Inc. Wet Chemistry Analyses

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-278

Metric Solid

WST ID: WS72614

Client ID Mixed Resins & Solids

Analysia	Method Reference	Detection Limit	Result	Units	Date Analyzed
ignitability (flash point)	SW-846 1010		111	• =	10/23/00

### Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	40.0	Not detected	10/19/00
WS72605	Cyanide & Sulfide Solids	40.0	360	10/19/00
WS72606	Sulfide	40.0	. 126	10/19/00
WS72607	Flammable Resins / Solids	40.0	94.8	10/19/00
WS72608	+Cu	40.0	48.2	10/20/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	40.1	10/20/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00
WS72613	Oily Liquid	40.0	Not detected	10/20/00
≥ WS72614	Mixed Resins & Solids	40.0	42.3	10/20/00

# Waste Stream Technology, Inc. Ignitability (flash point) SW-846 1010

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

Group Number: 2002-275

Matrix: Solid Units: \* F

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	NA	98.6	10/23/00
WS72605	Cyanide & Sulfide Solids	. NA	113	10/23/00
WS72606	Sulfide	NA	77.0	10/23/00
WS72607	Flammable Resins / Solids	NA	86.0	10/23/00
WS72608	+Cu	NA	82.4	10/23/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	>200	10/23/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA	100	10/23/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA	117	10/23/00

### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	40. <b>0</b>	Not detected	10/19/00
WS72605	Cyanide & Sulfide Solids	40.0	Not detected	10/19/00
WS72606	Sulfide	40.0	Not detected	10/19/00
WS72607	Flammable Resins / Solids	40.0	Not detected	10/19/00
WS72608	+Cu	40. <b>0</b>	Not detected	10/20/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	Not detected	10/20/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00
WS72613	Oily Liquid	40.0	Not detected	10/20/00
. WS72614	Mixed Resins & Solids	40.0	Not detected	10/20/00

### Waste Stream Technology, Inc. pH in Solid SW-846 9045C

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

Group Number: 2002-275

Matrix: Solid Units: pH Units

WSTID	Client ID	Detection Limit	Result	Date Analyzed	
WS72604	Cyanide Solids	NA	6.24	10/17/00	
WS72605	Cyanide & Sulfide Solids	NA	7.60	10/17/00	
WS72606	Sulfide	NA NA	7.75	10/17/00	
WS72607	Flammable Resins / Solids	NA	6.11	10/17/00	
WS72608	+Cu	NA	4.00	10/17/00	
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	7.92	10/17/00	
WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA	6.03	10/17/00	
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA	7.18	10/17/00	
WS72613	Oily Liquid	NA	8.49	10/17/00	
WS72614	Mixed Resins & Solids	NA	2.82	10/17/00	

### Waste Stream Technology, Inc. TCLP Volatile Organics Analysis 1311/8260B

Site: Olin - Drum Phase Date Sampled: 10/16/00 Group Number: 2002-275

Units: µg/L

Matrix: TCLP Extrac

Date Received: 10/16/00

WST ID: WS72614

Client ID: Mixed Resins & Solids

TCLP Date: 10/27/00 Date Analyzed: 10/31/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifie
vinyl chloride	100	Not detected	The state of the s	U
1,1-dichloroethene	50	Not detected	r	υ
chloroform	50	Not detected	•	U
2-butanone	1000	Not detected		U
1,2-dichloroethane	50	Not detected		U
carbon tetrachloride	50	Not detected		U
trichloroethene	50	Not detected		υ
benzene	50	Not detected		U
tetrachloroethene	50	Not detected		U
chlorobenzene	50	Not detected		U
1,4-dichlorobenzene	50	Not detected		υ
1,2-Dichloroethane-d4 (%)		96	70-121	
Toluene-d8 (%)		96	81-117	
Bromofluorobenzene (%)		90	74-121	

### Waste Stream Technology, Inc. 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/18/00

Group Number: 2002-275 Units: µg/L

Matrix: TCLP Extra

WST ID: WS72614

Client ID: Mixed Resins & Solids

Extraction Date: 10/26/00 Date Analyzed: 10/27/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifler
pyridine	10	Not detected		U
1,4-dichlorobenzene	10	Not detected	'	U
Total cresols(o,m & p)	30	128		
nitrobenzene	10	Not detected		U
hexachloroethane	10	Not detected		U
hexachlorobutadiene	10	Not detected		U
2,4,6-trichlorophenol	. 10	Not detected		U
2,4,5-trichlorophenol	10	Not detected		U
2,4-dinitrotoluene	10	Not detected		υ
hexachlorobenzene	10	Not detected		U
pentachlorophenol	50	Not detected		U
2-Fluorophenol (%)		46	21-100	
Phenol-d6 (%)		21	10-94	
Nitrobenzene-d5 (%)		87	35-114	
2-Fluorobiphenyl (%)		91	43-116	
2,4,6-Tribromophenol (%)		114	10-123	
Terphenyl-d14 (%)		94	33-141	

### Waste Stream Technology, Inc.

### TCLP Pesticide Analysis 1311/8081

Site: Olin - Drum Phase Date Sampled: 10/16/00

Date Received: 10/16/00

TCLP Extraction Date: 10/18/00

Group Number: 2002-275

Units: µg/L Matrix: TCLP Extract

WST ID: WS72614

lient ID: Mixed Resins & Solids

Extraction Date: 10/26/00 Date Analyzed: 10/28/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chlordane	0.350	Not detected		U
endrin	0.055	Not detected		U ·
gamma-BHC (Lindane)	0.016	Not detected		U
heptachlor	0.097	Not detected		U
heptachlor epoxide	0.042	Not detected	•	U
methoxychlor	0.031	Not detected		U
toxaphene	1.540	Not detected		U
Tetrachloro-m-xylene (%)		86	60-150	
Decachlorobiphenyl (%)	•	71	60- 150	

### Waste Stream Technology, Inc.

### Herbicides in TCLP Extract 1311/8150

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/18/00

Group Number: 2002-275

Units: mg/L

Matrix: TCLP Extr. #

WST ID: WS72614

lient ID: Mixed Resins & Solids

Extraction Date: 10/26/00 Date Analyzed: 10/30/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
2,4-D	0.02	Not detected		U
2,4,5-TP (Silvex)	0.02	Not detected		U
2,4-DCPAA (%)		78	10-127	

## Waste Stream Technology, Inc. TCLP Metals Analysis Result Report

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

Group Number: 2002-275

Units: mg/L

Matrix: TČLP Extract

TCLP Extraction Date: 10/18/00

WST ID: WS72614

Client ID: Mixed Resins & Solids

Digestion Date: 10/24/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	0.045	Not detected	10/25/00	SW-846 6010
Barium by ICP	0.025	0.049	10/25/00	SW-846 6010
Cadmium by ICP	0.025	0.028	10/25/00	SW-846 6010
Chromium by ICP	0.025	Not detected	10/25/00	SW-846 6010
Copper by ICP	0.045	<b>0.25</b> 5	10/25/00	SW-846 6010
Lead by ICP	0.075	Not detected	10/25/00	SW-846 6010
Mercury by Cold Vapor	0.001	Not detected	10/23/00	SW-846 7470
Nickel by ICP	0.025	Not detected	10/25/00	SW-846 6010
Selenium by ICP	0.095	Not detected	10/25/00	SW-846 6010
Silver by ICP	0.025	Not detected	10/25/00	SW-846 6010
Zinc by ICP	0.065	0.304	10/25/00	SW-846 6010

### Waste Stream Technology, Inc. PCBs in Soil

PCBs in Soil SW-846 8082

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: mg/Kg Matrix: Solid

WST ID: WS72614

Client ID: Mixed Resins & Solids

Extraction Date: 10/27/00 Date Analyzed: 10/28/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
aroclor 1016	0.750	Not detected	to the state of th	Ū
aroclor 1221	0.600	Not detected		U
aroclor 1232	0.900	Not detected	•	U
arocior 1242	0.450	Not detected		U
aroclor 1248	0.300	Not detected		U
aroclor 1254	0.150	Not detected		U
aroclor 1260	0.150	Not detected		U
Decachlorobiphenyl (%)		94	60-150	÷
Tetrachioro-m-xylene (%)		94	60- 150	

#### **METHODOLOGIES**

The specific methodologies employed in obtaining the analytical data reported are indicated on each of the result forms. The method numbers shown refer to the following U.S. Environmental Protection Agency Reference:

Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020, March 1979, Revised 1983, U.S. Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268.

Federal Register, 40 CFR Part 136: Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act. Revised July 1992.

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. Third Edition, Revised December 1996, U.S. EPA SW-846.

Annual Book of ASTM Standards, Volume II. ASTM, 100 Harbor Drive, West Conshohocken, PA 19428-2959.

Standard Methods for the Examination of Water and Wastewater. (20th Edition). American Public Health Association, 1105 18th Street, NW, Washington, D.C. 20036.

#### ORGANIC DATA QUALIFIERS

- U Indicates compound was analyzed for but not detected.
- J Indicates an estimated value. This flag is used to qualify the following: when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed; a compound is detected in the sample but the result is less than the method quantitation limit but greater than the statistically calculated laboratory method detection limit; the result for a compound is estimated due to the analysis of a sample beyond the USEPA defined holding time; the result for a compound is estimated due to a quality control sample result that is outside the laboratory quality control recovery limits.
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as the sample.
- E This flag identifies all compounds whose concentrations exceed the calibration range of the GC/MS instrument of that specific analysis.
- D This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G Matrix spike recovery is greater than the expected upper limit of analytical performance.
- L Matrix spike recovery is less than the expected lower limit of analytical performance.
- # Indicates that a surrogate recovery was found to be outside the expected limits of analytical performance.
- \$ Indicates that the surrogate compound was diluted out. The sample had to be diluted to obtain analytical results and a recovery could not be calculated.
- (%) Indicates that the compound is a surrogate and that the value reported for this compound is in percent recovery. The quality control recovery limits are indicated in the detection limit or QC limits column.

#### Case Narrative

The following comments and observations were made regarding the analysis of the composite samples from the Olin Drum Project site for Sevenson Environmental Services, Inc. corresponding to the Waste Stream Technology Inc. sample group number 2002-275 and sample numbers WS72604 through WS72615 which were composited on 10/18/00;

- 1.0 Sample Number WS72612 (Cyanide Liquid)
  - 1.1 Only one Olin Drum Project sample was identified as being a cyanide containing liquid. The volume of liquid received for this sample, designated as Waste Stream Technology sample ID number WS72612 was insufficient to perform the required TCLP analyses. Since additional sample volume could not be obtained, all of the analyses to be performed on WS72612 were canceled.
- 2.0 Sample Number WS72613 (Oily Liquid)
  - 2.1 Sample number WS72613 was an oily liquid that was not amenable to TCLP filtration, Subsequently, waste dilution analyses had to be performed on the sample. The results for sample number WS72613 are, therefore, reported on a weight per unit weight basis (i.e.,  $\mu$ g/kg or mg/kg basis).
- 3.0 Sample Number WS72615 (Water Soluble Liquid)
  - 2.1 Sample number WS72615 was a water soluble liquid that was not amenable to TCLP filtration, Subsequently, the TCLP analyses were performed on the unfiltered sample. As such, the TCLP date was listed as NA on the TCLP result report sheets.

Daniel W. Vollmer
OA/OC Officer



### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

ervice Agreement on File? YES	NO	Profile Number: W	мі <b>СN</b> 6877
14.00 LA	TSCA	Renewal Date:	/ / /
Waste Generator Information			
	CORPORATION	2. SIC Code: 우루우후	
Facility Street Address: 51 EX		4. Phone: (978) 658	- 6121
Facility City: WILMING		6. State/Province: MM M	
Zip/Postal Code: 01887		8. Generator USEPA/Federal !	D#: MADOOLYO31
County:		10. State/Province ID #:	- 1 - 7 - 1 - 1 - 1
	RPMATLEN		3) 3 36 - 4 SII 336 - 4166
	MORROW	14. Customer Fax: <u>425</u> .	Same as above
Billing Address Waste Stream Information		Management of the Control of the Con	
Description	<u> </u>	<u> </u>	· · · · · · · · · · · · · · · · · · ·
a. Name of Waste: + Cu			
b. Process Generating Waste:	) RUM EXCHUM	TION	
DRUM # 66,75			
c. Color d. Strong odo	e. Physical state	@ 70°F f. Layers	g. Free liquid range
(describe):		Liquid Single Layer	to %
CHEMICA		Sludge Multi-layer	
	Other		h. pH; Range
			to 4.60%
	stituents (including halogenated orgitive analysis):	ganics, debris, and UHC's) present in any con-	centration and submit
Constituents	Concentration Range	Constituents	Concentration Range
REACTIVE SULFICE	48 ppm	CHROMIUM	0-0,106 PP
FLASH POINT	82.4 °F	DRUM PHRES/DEBRUS	0-507
CHLOROFORM	6-27 PPb	564105	50-1009.
CRESOLS	0-9 116	SEE TELP MUNLYSIS	W5 72668
	ATEROMIZOSI ION MOSI	EQUAL OR EXCEED 100%	
	· · · · · · · · · · · · · · · · · · ·	plosive	
		ock Sensitive	
		ne carcinogens which require OSH	
		(list in Section B.1.j)	
		\$?	
If yes			
o. Does the waste represented by	his profile contain benzene	·?	TYES 29N
If yes, concentration	ppm		
		HAP?	
•	•		***************************************
		///\/	
Volatile organic concentration		/O)?	<b>⊠</b> YES □N
<del>"</del>			
		ting substances?	
r. Does the waste contain debris?	(list in Section B.1.j)	***************************************	MEYES □N
Quantity of Waste			
Estimated Annual Volume		ns □Yards 図Drums □Other (s	pecify)
Shipping Information			
a. Packaging:			
☐Bulk Solid; Type/Size:		☐Bulk Liquid; Type/Size:	
Morum; Type; Size: 85 6	Kum outaphe	· · · · · ·	
b. Shipping Frequency: Units		]Month	
a le this at LC Department of Tax	AND THE PROPERTY OF THE PARTY O	rdous Material? (If no, skip d, e, ar	d f BYES TY



### GENERATOR'S WASTE PROFILE SHEET PLEASE PRINT IN INK OR TYPE

	d. Rep	ortable Quar	itity (lbs.;kgs.):		e.	Hazard Class/ID #:	4.1	
				MABLE SOLL		MIC N.O.S. 4		S PCII
	g. Pers	sonal Protect	ive Equipment F	lequirements:				· /
	h. Trar	nsporter/Tran	sfer Station:					
C.C	Senerato	n's Cerillea	tion (Please cr	eck appropriate re	sponses, sign	, and date below.)		
1.	is th	is a USEPA ha If yes, identify	azardous waste (4 ALL USEPA liste	0 CFR Part 261)? If t d and characteristic v	the answer is no vaste code num	o, skip to 2bers (D, F, K, P, U)	***************************************	- □AE2 KN
	b.	If a characteri	stic hazardous wa	ste, do underlying haz	zardous constitu	uents		<del>.</del>
						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	□YES □NO	
				(if yes, list size and t		~p++++*p+************************	□YES □NO	
			·					
2.			dous waste? azardous waste c			·444··*·P·46·/*********************	P+++++++++++++++++++++++++++++++++++++	□YES ØN
	(O&UI)	ily ALL State :	ISTRICORP MAPIE C	oues				_
3.	ic the	waste from a	CERCI A (40 CER	300 Appendix B) or	state mandated	clean-up?		ZYES DN
•	if ves.	attach Recon	of Decision (RO)	D), 104/106 or 122 or	der or court orde	er that governs site clear	1-UD	•
	activit	y. For state m	andated clean-up	, provide relevant doc	umentation. M	CP 216 517.	e # 03-0	47(
4.	Does	the waste repr	esented by this w	aste profile sheet con	tain radioactive	material, or is disposal	<b>^</b>	
	regula	sted by the Nu	ciear Regulatory C	ommission?				□YES ØN
5.	Does	the waste repr	esented by this w	aste profile sheel con	tain concentration	ons of Polychlorinated		
<u>.</u> ,	Bipher	nyls (PCBs) re	gulated by 40 CFI	R 761? (if yes, list in 0	Chemical Comp	osition - B.1.j)		OYES BUN
	a. If y	es, were the F	CBs imported into	the U.S.?			□YES □NO	
6.	Do the	e waste profile	sheel and all atta	chments contain true	and accurate de	escriptions of the waste		
	materi	ial, and has all	relevant informati	on within the possess	ion of the Gene	erator regarding known o		
	suspe	cted hazards ;	ertaining to the w	aste been disclosed t	o the Contracto	7	*************************	_ ⊠YES □N
7.	Will all	changes which	ch occur in the cha	racter of the waste be	e identified by th	he Generator and disclos	sed	
MARKET COMMON TO	to the	Contractor pri	or to providing the	waste to the Contrac	tor?	~	*****	EÉYES □N
□Ch	eck here	if a Certifica	ite of Destruction	n or Disposal is req	uired.		8	
Any s	ample sul	bmitted is repr	esentative as defi	ned in 40 CFR 261 - A	Appendix I or by	using an equivalent me	thod. I authorize W	/M to obtain a
sampl	le from an	ny waste shipn	ent for purposes	of recertification. If th	is certification is	s made by a broker, the	undersigned signs a	as authorized
						neet from information progement, Contractor has a		
				ed and identified by t			an the necessary pe	mints and
Certif	fication S	Signature:		W.		Title: Øw.	بدا معمد المستدادة مستدا	
		or Print):	STEVE	M CXHOL C	ompany Nam		ucipac ex	
	. (.)					ned. Indicate the num	ber of attached p	ages /L/
			\				•	
	MANOGADOMI MACCOCONTINUES	igement's D	and the many places that a transfer of the angle of the a					USE ONLY
1.	Man	agement Me	hod   Landfill	Non-hazardoi			on 🔲 Incinera	tion
2.	Pron	nced lillimae	⊔⊓azardou e Management	-	□Other (Spec	ary)		***************************************
3.			_	ocedures, or Limita	tion on Appro	val.		***************************************
							***************************************	
4.	\\/a=	te Form		5. Sourc			Cura Time	
		e Decision		_		6.	System Type  Approved  [	Disapproved
		s Signature:	49	P+RR4##**********************	P4414PPPP44bPP44P44+44	^ I	Date:	Thusabhinaan
			e (Optional):				Date:	
Speci	ial Waste	e Approvals	Person Signatur	<b>e</b> :			)ate:	

302 Grote Street Buffalo, NY 14207 (716) 876-5290

#### Analytical Data Report

Group Number: 2002-275

Site: Olin - Drum Phase

#### Field and Laboratory Information

1 P 4-65 9779 1 DWo	- 11	PX 40	Date	Date	
WST ID	Client ID	Matrix	Sampled	Received	Time
WS72604	Cyanide Solids	Solid	10/16/00	10/16/00	11:00
WS72605	Cyanide & Sulfide Solids	Solid	10/16/00	10/16/00	11:00
WS72606	Sulfide	Solid	10/16/00	10/16/00	11:00
WS72607	Flammable Resins / Solids	Solid	10/16/00	10/16/00	11:00
<b>→&gt;</b> WS72608	+Cu	Solid	10/16/00	10/16/00	11:00
WS72609	Partially/Slightly H2O sol.Resins&Solids	Solid	10/16/00	10/16/00	11:00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	Solid	10/16/00	10/16/00	11:00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	Solid	10/16/00	10/16/00	11:00
WS72613	Oily Liquid	Oil	10/16/00	10/16/00	11:00
WS72614	Mixed Resins & Solids	Solid	10/16/00	10/16/00	11:00
WS72615	Water Sol. Liquid	Aqueous	10/16/00	10/16/00	11:00

#### Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275 Matrix: Solid

Watrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	40.0	Not detected	10/19/00
WS72605	Cyanide & Sulfide Solids	40.0	360	10/19/00
WS72606	Sulfide	40.0	126	10/19/00
WS72607	Flammable Resins / Solids	40.0	94.8	10/19/00
<b>→</b> WS72608	+Cu	40.0	48.2	10/20/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	40.1	10/20/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00
WS72613	Oily Liquid	40.0	Not detected	10/20/00
WS72614	Mixed Resins & Solids	40.0	42.3	10/20/00

# Waste Stream Technology, Inc. Ignitability (flash point) SW-846 1010

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275 Matrix: Solid

Matrix: Solid
Units: \* F

WSTID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	· NA	98.6	10/23/00
WS72605	Cyanide & Sulfide Solids	NA	113	10/23/00
WS72606	Sulfide	NA	77.0	10/23/00
WS72607	Flammable Resins / Solids	NA	86.0	10/23/00
→ WS72608	+Cu	NA	82.4	10/23/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	>200	10/23/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA	100	10/23/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA	117	10/23/00

#### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid
Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	40.0	Not detected	10/19/00
WS72605	Cyanide & Sulfide Solids	40.0	Not detected	10/19/00
WS72606	Sulfide	40.0	Not detected	10/19/00
WS72607	Flammable Resins / Solids	40.0	Not detected	10/19/00
→ WS72608	+Cu	40.0	Not detected	10/20/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	Not detected	1 <b>0/20/0</b> 0
WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00
WS72613	Oily Liquid	40.0	Not detected	10/20/00
WS72614	Mixed Resins & Solids	40.0	Not detected	10/20/00

#### Waste Stream Technology, Inc. pH in Solid SW-846 9045C

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: pH Units

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	NA	6.24	10/17/00
WS72605	Cyanide & Sulfide Solids	NA	7.60	10/17/00
WS72606	Sulfide	NA	7.75	10/17/00
WS72607	Flammable Resins / Solids	NA	6.11	10/17/00
→WS72608	+Cu	NA	4.00	10/17/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	7.92	10/17/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA	6.03	10/17/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA	7.18	10/17/00
WS72613	Oily Liquid	NA	8.49	10/17/00
WS72614	Mixed Resins & Solids	NA	2.82	10/17/00

#### **TCLP Volatile Organics Analysis** 1311/8260B

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: µg/L Matrix: TCLP Extra

WST ID: WS72608 Client ID: +Cu TCLP Date: 10/24/00

Date Analyzed: 10/25/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
vinyl chloride	100	Not detected		U
1,1-dichloroethene	<b>50</b> ·	Not detected		U
chloroform	50	27		J,B
2-butanone	1000	Not detected		U
1,2-dichloroethane	50	Not detected		U
carbon tetrachloride	50	Not detected		U
trichloroethene	50	Not detected		U
benzene	50	Not detected		U
tetrachloroethene	50	Not detected		U
chlorobenzene	50	Not detected		U
1,4-dichlorobenzene	50	Not detected		U
1,2-Dichloroethane-d4 (%)		101	70-121	
Toluene-d8 (%)		102	81-117	
Bromofluorobenzene (%)		96	74- 121	

#### 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/18/00

Group Number: 2002-275

Units: µg/L Matrix: TCLP Extrac

WST ID: WS72608

Client ID: +Cu

Extraction Date: 10/24/00 Date Analyzed: 10/24/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
pyridine	10	Not detected		U
1,4-dichlorobenzene	10	Not detected		U
Total cresols(o,m & p)	30	9		J
nitrobenzene	10	Not detected		U
hexachloroethane	10	Not detected		U
hexachlorobutadiene	10	Not detected		U
2,4,6-trichlorophenol	10	Not detected		U
2,4,5-trichlorophenol	10	Not detected		U
2,4-dinitrotoluene	10	Not detected		U
hexachlorobenzene	10	Not detected		U
pentachlorophenol	50	Not detected		U
2-Fluorophenol (%)		45	21-100	
Phenol-d6 (%)		32	10-94	
Nitrobenzene-d5 (%)		95	35-114	
2-Fluorobiphenyl (%)		88	43-116	
2,4,6-Tribromophenol (%)		72	10-123	
Terphenyl-d14 (%)		95	33- 141	

#### TCLP Pesticide Analysis 1311/8081

Site: Olin - Drum Phase

Group Number: 2002-275

Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/18/00

Units: µg/L Matrix: TCLP Extrac

WST ID: WS72608

lient ID: +Cu

Extraction Date: 10/26/00 Date Analyzed: 10/28/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chlordane	0.350	Not detected		U
endrin	0.055	Not detected		U
gamma-BHC (Lindane)	0.016	Not detected		U
heptachlor	0.097	Not detected		U
heptachlor epoxide	0.042	Not detected		U
methoxychlor	0.031	Not detected		U
toxaphene	1.540	Not detected		U
Tetrachloro-m-xylene (%)		34	60- 150	#
Decachlorobiphenyl (%)		59	60- 150	#

#### Herbicides in TCLP Extract 1311/8150

Site: Olin - Drum Phase Date Sampled: 10/16/00

Date Received: 10/16/00 TCLP Extraction Date: 10/18/00 Group Number: 2002-275

Units: mg/L Matrix: TCLP Extra

WST ID: WS72608

lient ID: +Cu

Extraction Date: 10/26/00 Date Analyzed: 10/29/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
2,4-D	0.02	Not detected		·U
2,4,5-TP (Silvex)	0.02	Not detected		U
2,4-DCPAA (%)		<b>75</b>	10- 127	

## Waste Stream Technology, Inc. TCLP Metals Analysis Result Report

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: mg/L

Matrix: TCLP Extrac TCLP Extraction Date: 10/18/00

WST ID: WS72608

Client ID: +Cu Digestion Date: 10/20/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	0.045	0.065	10/20/00	SW-846 6010
Barium by ICP	0.025	Not detected	10/20/00	SW-846 6010
Cadmium by ICP	0.025	Not detected	10/20/00	SW-846 6010
Chromium by ICP	0.025	0.106	10/20/00	SW-846 6010
Copper by ICP	0.045	0.076	10/20/00	SW-846 6010
Lead by ICP	0.075	Not detected	10/20/00	SW-846 6010
Mercury by Cold Vapor	0.001	Not detected	10/23/00	SW-846 7470
Nickel by ICP	0.025	0.053	10/20/00	SW-846 6010
Selenium by ICP	0.095	Not detected	10/20/00	SW-846 6010
Silver by ICP	0.025	Not detected	10/20/00	SW-846 6010
Zinc by ICP	0.065	0.124	10/20/00	SW-846 6010

#### Waste Stream Technology, Inc. PCBs in Soil SW-846 8082

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

Group Number: 2002-275 Units: mg/Kg Matrix: Solid

WST ID: WS72608 Client ID: +Cu Extraction Date: 10/27/00

Date Analyzed: 10/27/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
aroclor 1016	0.750	Not detected		Ū
aroclor 1221	0.600	Not detected	,	U
aroclor 1232	0.900	Not detected		U
aroclor 1242	0.450	Not detected		U
aroclor 1248	0.300	Not detected		Ū
aroclor 1254	0.150	Not detected		U
aroclor 1260	0.150	Not detected		Ū
Decachlorobiphenyl (%)		90	60-150	<u>-</u>
Tetrachloro-m-xylene (%)		88	60-150	
Dilution Factor 15	A COMMANDE C		· · · · · · · · · · · · · · · · · · ·	<del></del>

#### **METHODOLOGIES**

The specific methodologies employed in obtaining the analytical data reported are indicated on each of the result forms. The method numbers shown refer to the following U.S. Environmental Protection Agency Reference:

Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020, March 1979, Revised 1983, U.S. Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268.

Federal Register, 40 CFR Part 136: Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act. Revised July 1992.

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. Third Edition, Revised December 1996, U.S. EPA SW-846.

Annual Book of ASTM Standards, Volume II. ASTM, 100 Harbor Drive, West Conshohocken, PA 19428-2959.

Standard Methods for the Examination of Water and Wastewater. (20th Edition). American Public Health Association, 1105 18th Street, NW, Washington, D.C. 20036.

#### ORGANIC DATA QUALIFIERS

- U Indicates compound was analyzed for but not detected.
- J Indicates an estimated value. This flag is used to qualify the following: when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed; a compound is detected in the sample but the result is less than the method quantitation limit but greater than the statistically calculated laboratory method detection limit; the result for a compound is estimated due to the analysis of a sample beyond the USEPA defined holding time; the result for a compound is estimated due to a quality control sample result that is outside the laboratory quality control recovery limits.
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as the sample.
- E This flag identifies all compounds whose concentrations exceed the calibration range of the GC/MS instrument of that specific analysis.
- **D** This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G Matrix spike recovery is greater than the expected upper limit of analytical performance.
- L Matrix spike recovery is less than the expected lower limit of analytical performance.
- # \_ Indicates that a surrogate recovery was found to be outside the expected limits of analytical performance.
- \$ Indicates that the surrogate compound was diluted out. The sample had to be diluted to obtain analytical results and a recovery could not be calculated.
- (%) Indicates that the compound is a surrogate and that the value reported for this compound is in percent recovery. The quality control recovery limits are indicated in the detection limit or QC limits column.

#### Case Narrative

The following comments and observations were made regarding the analysis of the composite samples from the Olin Drum Project site for Sevenson Environmental Services, Inc. corresponding to the Waste Stream Technology Inc. sample group number 2002-275 and sample numbers WS72604 through WS72615 which were composited on 10/18/00;

- 1.0 Sample Number WS72612 (Cyanide Liquid)
  - 1.1 Only one Olin Drum Project sample was identified as being a cyanide containing liquid. The volume of liquid received for this sample, designated as Waste Stream Technology sample ID number WS72612 was insufficient to perform the required TCLP analyses. Since additional sample volume could not be obtained, all of the analyses to be performed on WS72612 were canceled.
- 2.0 Sample Number WS72613 (Oily Liquid)
  - 2.1 Sample number WS72613 was an oily liquid that was not amenable to TCLP filtration, Subsequently, waste dilution analyses had to be performed on the sample. The results for sample number WS72613 are, therefore, reported on a weight per unit weight basis (i.e.,  $\mu g/kg$  or mg/kg basis).
- 3.0 Sample Number WS72615 (Water Soluble Liquid)
  - 2.1 Sample number WS72615 was a water soluble liquid that was not amenable to TCLP filtration, Subsequently, the TCLP analyses were performed on the unfiltered sample. As such, the TCLP date was listed as NA on the TCLP result report sheets.

Daniel W. Vou	Date	11/3/00
Daniel W. Vollmer		
QA/QC Officer		



#### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

Service Agreement on File? XYES	אט אייטיין אַטאַטריי	Pmfile Number V	VMI CN6878
	TSCA	Renewal Date:	
A. Waste Generator Information	IIOUA	1 2414 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	*
	<u> </u>		
***************************************	COKPORKTON	2. SIC Code: শ্বীপ্র	
3. Facility Street Address: <u>51 らみ</u>		4. Phone: <u>( የ 7 ያ</u> ) <u>ሬ ታ</u> ነ	<u> </u>
5. Facility City: WILMINGT	e W	6. State/Province: 194 M	ID #: MXOCOLY 03/04
7. Zip/Postal Code: 01 \$ 87		_ 8. Generator USEPA/Federal 10. State/Province ID #:	ID #. MINOSEL 4 6 3/64
9. County:	RPORRTION		23) 336- 4511
	Merken		- 776-4166
15. Billing Address	747072.8.14		সিSame as above
B. Waste Stream Information		enganingan (1995), para menganakan menganakan di kembanakan menganakan di kembanakan di kembanakan di kembanak Per	
1. Description	<u>and a superior and a</u>	<u> </u>	
a. Name of Waste: SULF	OE-		
b. Process Generating Waste:		iktion	
DRUM # 125 5	<u>5,63</u>		· · ·
c. Color d. Strong odo	1		g. Free liquid range
(describe):	, —	☐Liquid ☑Single Layer	to %
CHEMICO	· · · · · · · · · · · · · · · · · · ·	]Sludge ☐Multi-layer :	
	□Other _		h. pH: Range
			to 7.75%
i. Liquid Flash Point:	□73-99°F □100-139°	F	Not applicable
j. Chemical Composition (List all con	stituents [including halogenated or	ganics, debris, and UHC's) present in any co	ncentration and submit
representa	tive analysis);		
Constituents	Concentration Range	Constituents	Concentration Range
	_	II .	0- 50%
REACTIVE SULPIOE	0-360 PPM	DRUM PHACS/ DEBALS	
FLUSH PUINT CRESOLS	77 °F 0-850 PPb	504103	50-1007.
71NC	0 - 0,178 PFM	<b>6</b> D	
		EQUAL OR EXCEED 100%	
		cplosiveRadioact	
		nock Sensitive Water Re	
		he carcinogens which require OSF	
			<del></del>
m. Does the waste represented by			
n. Does the waste represented by t	ins profile contain aspesto	s?	TYES MO
if yes		guavie 9?	
If yes, concentration	ppm	# [	Пто Вк
		HAP?	DYES PNO
		HPM	
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
		<b>/O</b> )?	
Volatile organic concentration		mw	
		eting substances?	
r. Does the waste contain debris?	(list in Section B.1.j)	***************************************	BEYES ONO
2. Quantity of Waste			
Estimated Annual Volume	<i>3</i> □To	ns	specify)
		Comment (Same Comment)	
3. Shipping Information	*		
a. Packaging:	No.	generally group	
Bulk Solid; Type/Size1-110	_	☐Bulk Liquid; Type/Size	- 4
SDrum; Type; Size - 85 CA	CLOW OUTH PACK	Other:	
b. Shipping Frequency: Units	7 Per:[	]Month □Quarter □Year ☑One	
c. Is this a U.S. Department of Train	rsportation (USDOT) Haza	irdous material? (If no, skip d, e, a	nd f) PAYES N



### GENERATOR'S WASTE PROFILE SHEET PLEASE PRINT IN INK OR TYPE

1	e. Hazard Class/ID #: USDOT Shipping Name: FLAMMARLE FOLIDS OKEMAIC 知の5、 Y.1、UN 132 Personal Protective Equipment Requirements: Transporter/Transfer Station:	s, Pa
e e	nerator's Certification (Please check appropriate responses, sign, and date below.)	2
1.	Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2	□YES K
	b. If a characteristic hazardous waste, do underlying hazardous constituents (UHCs) apply? (if yes, list in Section B.1.))	
2.	is this a state hazardous waste?	□YES 🗷
3.	Is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up?	BYES □
4.	Does the waste represented by this waste profile sheet contain radioactive material, or is disposal regulated by the Nuclear Regulatory Commission?	□YES Ø
5.	Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated	TYES K
6.	Do the waste profile sheet and all attachments contain true and accurate descriptions of the waste material, and has all relevant information within the possession of the Generator regarding known or suspected hazards pertaining to the waste been disclosed to the Contractor?	ØYES □
7.	Will all changes which occur in the character of the waste be identified by the Generator and disclosed to the Contractor prior to providing the waste to the Contractor?	K∯YES []
Che	k here if a Certificate of Destruction or Disposal is required.	
sample agent of informa license Certific	Inple submitted is representative as defined in 40 CFR 251 - Appendix I or by using an equivalent method. It authorize WM to from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs as authorize with the generator and has confirmed the information contained in this Profile Sheet from information provided by the generator at the state of the contractor has all the necessary permits for the waste that has been characterized and identified by this approved profile.  Title: PRINCIPME ENGINEERAL COMPANY (Type or Print):	ithorized and addition and
	Check if additional information is attached. Indicate the number of attached pages	\$
D. W	I Management's Decision FOR WM USE	ONLY
1.	Management Method   Landfill   Non-hazardous Solidification   Bioremediation   Incineration   Other (Specify)	
2. 3.	Proposed Ultimate Management Facility: Precautions, Special Handling Procedures, or Limitation on Approval:	
4.	Waste Form 5. Source 6. System Type	
	Waste Decision	approved
	erson's Signature: Date:	- 4- 4
	n Approval Signature (Optional):  I Waste Approvals Person Signature:  Date:	

302 Grote Street Buffalo, NY 14207 (716) 876-5290

#### Analytical Data Report

Group Number: 2002-275

Site: Olin - Drum Phase

#### Field and Laboratory Information

WST ID	Client ID	Matrix	Date Sampled	Date Received	Time
WS72604	Cyanide Solids	Solid	10/16/00	10/16/00	11:00
WS72605	Cyanide & Sulfide Solids	Solid	10/16/00	10/16/00	11:00
>WS72606	Sulfide	Solid	10/16/00	10/16/00	11:00
WS72607	Flammable Resins / Solids	Solid	10/16/00	10/16/00	11:00
WS72608	+Cu	Solid	10/16/00	10/16/00	11:00
WS72609	Partially/Slightly H2O sol.Resins&Solids	Solid	10/16/00	10/16/00	11:00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	Solid	10/16/00	10/16/00	11:00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	Solid	10/16/00	10/16/00	11:00
WS72613	Oily Liquid	Oil	10/16/00	10/16/00	11:00
WS72614	Mixed Resins & Solids	Solid	10/16/00	10/16/00	11:00
WS72615	Water Sol. Liquid	Aqueous	10/16/00	10/16/00	11:00

#### Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: mg/Kg

WST	D	Client ID	Detection Limit	Result	Date Analyzed
WS72	604 Cy	anide Solids	40.0	Not detected	10/19/00
WS72	305 Cyanide	& Sulfide Solids	40.0	360	10/19/00
→ WS72	506	Sulfide	40.0	126	10/19/00
WS72	507 Flammat	ole Resins / Solids	40.0	94.8	10/19/00
WS72	508	+Cu	40.0	48.2	10/20/00
WS72	Partially/Slightly	H2O sol.Resins&Solids	40.0	40.1	10/20/00
WS72	S10 Slightly/Partially	Hexane sol. Resins&Sol	40.0	Not detected	10/20/00
WS72	S11 Slightly/Partially	Hexane&H2O sol.Resins	40.0	Not detected	10/20/00
WS72	513 (	Dily Liquid	40.0	Not detected	10/20/00
WS726	Mixed	Resins & Solids	40.0	42.3	10/20/00

# Waste Stream Technology, Inc. Ignitability (flash point) SW-846 1010

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

Group Number: 2002-275

Matrix: Solid Units: \*F

WSTID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	NA	98.6	10/23/00
WS72605	Cyanide & Sulfide Solids	NA	113	10/23/00
→ WS72606	Sulfide	NA	77.0	10/23/00
WS72607	Flammable Resins / Solids	NA	86.0	10/23/00
WS72608	+Cu	NA	82.4	10/23/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	>200	10/23/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA	100	10/23/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA	117	10/23/00

#### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

Group Number: 2002-275

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	40.0	Not detected	10/19/00
WS72605	Cyanide & Sulfide Solids	40.0	Not detected	10/19/00
>WS72606	Sulfide	40.0	Not detected	10/19/00
WS72607	Flammable Resins / Solids	40.0	Not detected	10/19/00
WS72608	+Cu	40.0	Not detected	10/20/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	Not detected	10/20/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00
WS72613	Oily Liquid	40.0	Not detected	10/20/00
WS72614	Mixed Resins & Solids	40.0	Not detected	10/20/00

#### Waste Stream Technology, Inc. pH in Solid SW-846 9045C

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

Group Number: 2002-275

Matrix: Solid Units: pH Units

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	NA	6.24	10/17/00
WS72605	Cyanide & Sulfide Solids	NA	7.60	10/17/00
<del>-&gt;</del> WS72606	Sulfide	NA NA	7.75	10/17/00
WS72607	Flammable Resins / Solids	NA	6.11	10/17/00
WS72608	+Cu	NA	4.00	10/17/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	7.92	10/17/00
WS72610	Slightly/Partially Hexane sol. Resins&Sol	NA	6.03	10/17/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA	7.18	10/17/00
WS72613	Oily Liquid	NA	8.49	10/17/00
WS72614	Mixed Resins & Solids	NA	2.82	10/17/00

#### Waste Stream Technology, Inc. **TCLP Volatile Organics Analysis** 1311/8260B

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

Group Number: 2002-275

Units: µg/L Matrix: TCLP Extr :

WST ID: WS72606 Client ID: Sulfide TCLP Date: 10/24/00 Date Analyzed: 10/25/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
vinyl chloride	100	Not detected		U
1,1-dichloroethene	50	Not detected		U
chloroform	50	Not detected	•	U
2-butanone	1000	Not detected		U
1,2-dichloroethane	50	Not detected		U
carbon tetrachloride	50	Not detected		U
trichloroethene	50	Not detected		U
benzene	50	Not detected		U
tetrachloroethene	50	Not detected		U
chlorobenzene	50	Not detected		U
1,4-dichlorobenzene	50	Not detected		U
1,2-Dichloroethane-d4 (%)		104	70-121	
Toluene-d8 (%)	•	104	81-117	
Bromofluorobenzene (%)		97	74-121	•

#### Waste Stream Technology, Inc. 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 10/16/00

Date Received: 10/16/00

TCLP Extraction Date: 10/17/00

Group Number: 2002-275

Units: µg/L Matrix: TCLP Extrac

WST ID: WS72606 Client ID: Sulfide Extraction Date: 10/24/00

Date Analyzed: 10/25/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifie
pyridine	100	Not detected		U
1,4-dichlorobenzene	100	Not detected		U
Total cresols(o,m & p)	300	850		
nitrobenzene	100	Not detected		U
hexachloroethane	100	Not detected		U
hexachlorobutadiene	100	Not detected		U
2,4,6-trichlorophenol	100	Not detected		U
2,4,5-trichlorophenol	100	Not detected		U
2,4-dinitrotoluene	100	Not detected		U
hexachlorobenzene	100	Not detected		U
pentachlorophenol	500	Not detected		U
2-Fluorophenol (%)		37	21-100	
Phenol-d6 (%)		18	10-94	
Nitrobenzene-d5 (%)		68	35-114	
2-Fluorobiphenyl (%)		78	43-116	
2,4,6-Tribromophenol (%)		84	10-123	
Terphenyl-d14 (%)		77	33-141	

Dilution Factor

## inology, Inc.

Group Number: 2002-275

Units: µg/L

Matrix: TCLP Extract

372606 ifide 25/00 28/00

Result	QC Limits (%)	Qualifier
ot detected	,	U
ot detected	* •	U
ot detected		U
78	60-150	
66	60-150	

Site: Olin - Dru Date Sampled: Date Received: TCLP Extractio

Compound

pyridine 1,4-dichlorobanz Total cresols ,r nitrobenzene hexachloroet/ in hexachlorobu id 2,4,6-trichlorophe 2,4,5-trichlor@he 2,4-dinitrotolu\_ne hexachlorobenze pentachlorop in 2-Fluoropheno (' Phenol-d6 (%) Nitrobenzene 5 2-Fluorobiphenyl 2,4,6-Tribromooh Terphenyl-d1/ 1/9/ **Dilution Factor** 

## inology, Inc.

Group Number: 2002-275

Units: µg/L

Matrix: TCLP Extract

372606 fide 25/00 28/00

Result	QC Limits (%)	Qualifier
ot detected		U
ot detected	-	U
ot detected		U
78	60-150	
66	60- 150	

Site: Olin - Dr. Date Sampled: Date Received: TCLP Extractio

Compound

pyridine 1,4-dichlorobenz Total cresols(o,r. nitrobenzene hexachloroethan hexachlorobutad 2,4,6-trichlorophi 2,4,5-trichlorophi 2,4-dinitrotoluene hexachiorobenze pentachlorophen 2-Fluorophenoi (1 Phenol-d6 (%) Nitrobenzene-d5 2-Fluorobiphenyl 2,4,6-Tribromoph Terphenyl-d14 (% **Dilution Factor** 



#### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

Service Agreement on File?   Hazardous Non-Hazard  A. Waste Generator Informat	lous TSCA	Profile Number: W Renewal Date:	мі <u>CN68/8</u>
1. Generator Name: 6 3. Facility Street Address: 5. Facility City: Let Let Let Let Let Let Let Let Let Let	LIN COMPORATION 51 EMMES 37 NINGTON 187 N CORPORATION TEUE MORKOW	10. State/Province ID #: 12. Customer Phone: (¥ 2	- 6 (2 )  D#: MMO04  Y 6 3(8 Y  3) 332- Y 5 (1  - 736- Y 166  XSame as above
(d	rong odor e. Physical si escribe): 区Solid 回Gas □Other	iate @ 70°F  f. Layers  ☐Liquid	g. Free liquid range to %  h. pH: Range to 7.75%
i. Liquid Flash Point: [] j. Chemical Composition Constituents REMETILE SULPT FLUSH PULLT	(List all constituents [including halogenated representative analysis):  Concentration Range	9°F □140-199°F □≥ 200°F organics, debris, and UHC's) present in any cond  Constituents  DRUM PRAFS/ DFBALS  SOLLOS	Concentration Range
CRESOLS ZINC	0-850 PP6 0-0,178 PF1	Sed ATTACKED TO	00
notification? (list in Second. Does the waste represent if yes	Pyrophoric Infectious Infectious Infectious Infectious Inted by this profile contain any of the profile contain dioxing Inted by this profile contain asbest Inted by this profile contain benze Inted by this profile contain benze Inted by this profile contain benze Intel benzene waste operations NE	Explosive	Ctive   A
If no, does the waste m If no, does the waste co Volatile organic concent q. Does the waste contain	eet the organic LDR Exemption?. Intain <500 ppmw volatile organic Iration	(VO)?ppmw	
Quantity of Waste     Estimated Annual Volume		ons □Yards ∰Drums □Other (sp	
3. Shipping Information a. Packaging:  ☐Bulk Solid; Type/Size ☑Drum; Type; Size ☑	35 CALLON OVER PACIE	Bulk Liquid; Type/Size: Other:	
b. Shipping Frequency: Ü	nits 7 Per	:∷ Month	me



### GENERATOR'S WASTE PROFILE SHEET PLEASE PRINT IN INK OR TYPE

· d		
f.		325 PC
g	. Personal Protective Equipment Requirements:	·
h.	. Transporter/Transfer Station:	
CHIEF CHIEF		
C. Ge	nerator's Certification (Please check appropriate responses, sign, and date below.)	f
1.	is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2	OYES KIN
	b. If a characteristic hazardous waste, do underlying hazardous constituents  (UHCs) apply? (if yes, list in Section B.1.j)	<del>_</del> o
	c. Does this waste contain debris? (if yes, list size and type in Chemical  Composition - B.1.)	<b>)</b>
2.	is this a state hazardous waste?	. TYES KIN
<b>-</b>	Identify ALL state hazardous waste codes	
3.	Is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up?  If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site clean-up activity. For state mandated clean-up, provide relevant documentation. MROCP 216 5176 # 03	
4,	Does the waste represented by this waste profile sheet contain radioactive material, or is disposal regulated by the Nuclear Regulatory Commission?	□YES ⊠N
5.	Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated	
	Biphenyls (PCBs) regulated by 40 CFR 761? (if yes, list in Chemical Composition - B.1.j)	
6.	Do the waste profile sheet and all attachments contain true and accurate descriptions of the waste material, and has all relevant information within the possession of the Generator regarding known or suspected hazards pertaining to the waste been disclosed to the Contractor?	. RYES ON
7,	Will all changes which occur in the character of the waste be identified by the Generator and disclosed to the Contractor prior to providing the waste to the Contractor?	. PÁYES □
		. 6120
Chec	ck here if a Certificate of Destruction or Disposal is required.	
sample : agent of informat licenses	Inple submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. I authorize from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs of the generator and has confirmed the information contained in this Profile Sheet from information provided by the generator and has determined to be reasonably necessary. If approved for management, Contractor has all the necessary is for the waste that has been characterized and identified by this approved profile.  Title: PRINCIPME	s as authorized erator and additions
Name (	(Type or Print): Company Name:	Date: 11/;
	☐ Check if additional information is attached. Indicate the number of attached	pages
		<del></del>
D. WM	Management's Decision FOR WI	JUSE ONLY
1.	Management Method ☐Landfill ☐Non-hazardous Solidification ☐Bioremediation ☐Incine ☐Hazardous Stabilization ☐Other (Specify)	
2.	Proposed Ultimate Management Facility:	
3.	Precautions, Special Handling Procedures, or Limitation on Approval:	
4.	Waste Form 5. Source 6. System Type	
- •	I LAL A PART A STATE OF THE STA	CT Pilane
		☐Disapproved
	Waste Approvals Person Signature: Date:	

302 Grote Street Buffalo, NY 14207 (716) 876-5290

#### Analytical Data Report

Group Number: 2002-275

Site: Olin - Drum Phase

#### Field and Laboratory Information

			Date	Date	÷
WSTID	Client ID	Matrix	Sampled	Received	Time
WS72604	Cyanide Solids	Solid	10/16/00	10/16/00	11:00
WS72605	Cyanide & Sulfide Solids	Solid	10/16/00	10/16/00	11:00
▶WS72606	Sulfide	Solid	10/16/00	10/16/00	11:00
WS72607	Flammable Resins / Solids	Solid	10/16/00	10/16/00	11:00
WS72608	+Cu	Solid	10/16/00	10/16/00	11:00
WS72609	Partially/Slightly H2O sol.Resins&Solids	Solid	10/16/00	10/16/00	11:00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	Solid	10/16/00	10/16/00	11:00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	Solid	10/16/00	10/16/00	11:00
WS72613	Oily Liquid	Oil	10/16/00	10/16/00	11:00
WS72614	Mixed Resins & Solids	Solid	10/16/00	10/16/00	11:00
WS72615	Water Sol. Liquid	Aqueous	10/16/00	10/16/00	11:00

#### Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: mg/Kg

	WST ID	Client ID	Detection Limit	Result	Date Analyzed
	WS72604	Cyanide Solids	40.0	Not detected	10/19/00
	WS72605	Cyanide & Sulfide Solids	40.0	360	10/19/00
<del>-&gt;</del>	WS72606	Sulfide	40.0	126	10/19/00
	WS72607	Flammable Resins / Solids	40.0	94.8	10/19/00
	WS72608	+Cu	40.0	48.2	10/20/00
	WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	40.1	10/20/00
	WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00
•	WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00
	WS72613	Oily Liquid	40.0	Not detected	10/20/00
	WS72614 ·	Mixed Resins & Solids	40.0	42.3	10/20/00

#### Waste Stream Technology, Inc. Ignitability (flash point) SW-846 1010

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: \* F

WSTID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	NA	98.6	10/23/00
WS72605	Cyanide & Sulfide Solids	NA	113	10/23/00
→ WS72606	Sulfide	NA	77.0	10/23/00
WS72607	Flammable Resins / Solids	NA	86.0	10/23/00
WS72608	+Cu	NA	82.4	10/23/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	>200	10/23/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA	100	10/23/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA	117	10/23/00

#### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	40.0	Not detected	10/19/00
WS72605	Cyanide & Sulfide Solids	40.0	Not detected	10/19/00
→WS72606	Sulfide	40.0	Not detected	10/19/00
WS72607	Flammable Resins / Solids	40.0	Not detected	10/19/00
WS72608	+Cu	40.0	Not detected	10/20/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	Not detected	10/20/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00
WS72613	Oily Liquid	40.0	Not detected	10/20/00
WS72614	Mixed Resins & Solids	40.0	Not detected	10/20/00

#### Waste Stream Technology, Inc. pH in Solid SW-846 9045C

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: pH Units

WSTID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	NA	6.24	10/17/00
WS72605	Cyanide & Sulfide Solids	NA	7.60	10/17/00
→>ws72606	Sulfide	NA	7.75	10/17/00
WS72607	Flammable Resins / Solids	NA	6.11	10/17/00
WS72608	+Cu	NA	4.00	10/17/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	7.92	10/17/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA	6.03	10/17/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA	7.18	10/17/00
WS72613	Oily Liquid	NA	8.49	10/17/00
WS72614	Mixed Resins & Solids	NA	2.82	10/17/00

### Waste Stream Technology, Inc. TCLP Volatile Organics Analysis

TCLP Volatile Organics Analysis
1311/8260B

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: µg/L

Matrix: TCLP Extr

WST ID: WS72606 Client ID: Sulfide TCLP Date: 10/24/00 Date Analyzed: 10/25/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
vinyl chloride	100	Not detected		U
1,1-dichloroethene	50	Not detected		υ
chloroform	50	Not detected		U
2-butanone	1000	Not detected		U
1,2-dichloroethane	50	Not detected		U
carbon tetrachloride	50	Not detected		υ
trichloroethene	50	Not detected		U
benzene	50	Not detected		υ
tetrachloroethene	50	Not detected		U
chlorobenzene	50	Not detected		U
1,4-dichlorobenzene	50	Not detected		U
1,2-Dichloroethane-d4 (%)		104	70-121	
Toluene-d8 (%)		104	81-117	
Bromofluorobenzene (%)		97	74-121	

Dilution Factor

#### Waste Stream Technology, Inc. 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/17/00

Group Number: 2002-275 Units: μg/L Matrix: TCLP Extrac

WST ID: WS72606 Client ID: Sulfide

Extraction Date: 10/24/00 Date Analyzed: 10/25/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
pyridine	100	Not detected		U
1,4-dichlorobenzene	100	Not detected	•	U
Total cresols(o,m & p)	300	850		
nitrobenzene	100	Not detected		U
hexachloroethane	100	Not detected	•	U
hexachlorobutadiene	100	Not detected		U
2,4,6-trichlorophenol	100	Not detected		U
2,4,5-trichlorophenol	100	Not detected		U
2,4-dinitrotoluene	100	Not detected		U
hexachlorobenzene	100	Not detected		U
pentachlorophenol	500	Not detected		U
2-Fluorophenoi (%)		37	21-100	
Phenol-d6 (%)		18	10-94	
Nitrobenzene-d5 (%)		68	35-114	
2-Fluorobiphenyl (%)		78	43-116	
2,4,6-Tribromophenol (%)		84	10-123	
Terphenyi-d14 (%)		77	33-141	

Dilution Factor

## Waste Stream Technology, Inc. TCLP Pesticide Analysis 1311/8081

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/17/00

Group Number: 2002-275

Units: µg/L

Matrix: TCLP Extra

WST ID: WS72606

Client ID: Sulfide Extraction Date: 10/25/00 Date Analyzed: 10/28/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier	
chlordane	0.350	Not detected		U	
endrin	0.055	Not detected	,	U	
gamma-BHC (Lindane)	0.016	Not detected		U	
heptachlor	0.097	Not detected		U	
heptachlor epoxide	0.042	Not detected		Ŭ	
methoxychlor	0.031	Not detected		U	
toxaphene	1.540	Not detected		U	
Tetrachloro-m-xylene (%)		78	60-150		
Decachlorobiphenyl (%)		66	60- 150		·

**Dilution Factor** 

#### Waste Stream Technology, Inc. Herbicides in TCLP Extract 1311/8150

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/17/00

Group Number: 2002-275

Units: mg/L Matrix: TCLP Extract

WST ID: WS72606 Client ID: Sulfide

Extraction Date: 10/24/00 Date Analyzed: 10/25/00

Compound	•	Detection Limit	Result	QC Limits (%)	Qualifier
2,4-D	•	0.02	Not detected		U
2,4,5-TP (Silvex)		<b>0</b> .02	Not detected	<b>,</b> ,	U
2,4-DCPAA (%)			109	10-127	
Dilution Factor	1				

## Waste Stream Technology, Inc. TCLP Metals Analysis Result Report

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: mg/L

Matrix: TCLP Extrant

TCLP Extraction Date: 10/17/00

WST ID: WS72606 Client ID: Sulfide

Digestion Date: 10/19/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	0.045	Not detected	10/19/00	SW-846 6010
Barium by ICP	0.025	0.033	10/19/00	SW-846 6010
Cadmium by ICP	0.025	Not detected	10/19/00	SW-846 6010
Chromium by ICP	0.025	Not detected	10/19/00	SW-846 6010
Copper by ICP	0.045	0.094	10/19/00	SW-846 6010
Lead by ICP	0.075	Not detected	10/19/00	SW-846 6010
Mercury by Cold Vapor	0.001	Not detected	10/23/00	SW-846 7470
Nickel by ICP	0.025	0.027	10/19/00	SW-846 6010
Selenium by ICP	0.095	Not detected	10/19/00	SW-846 6010
Silver by ICP	0.025	Not detected	10/19/00	SW-846 6010
Zinc by ICP	0.065	0.178	10/19/00	SW-846 6010

# Waste Stream Technology, Inc. PCBs in Soil SW-846 8082

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: mg/Kg Matrix: Solid

WST ID: WS72606 Client ID: Sulfide

Extraction Date: 10/27/00 Date Analyzed: 10/27/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifie
aroclor 1016	0.750	Not detected		U
aroclor 1221	0.600	Not detected		U
aroclor 1232	0.900	Not detected	•	U
arocior 1242	0.450	Not detected		U
aroclor 1248	0.300	Not detected		U
aroclor 1254	0.150	Not detected		U
aroclor 1260	0.150	Not detected	•	U
Decachiorobiphenyl (%)		85	60-150	
Tetrachioro-m-xylene (%)		95	60- 150	

Dilution Factor 15

#### **METHODOLOGIES**

The specific methodologies employed in obtaining the analytical data reported are indicated on each of the result forms. The method numbers shown refer to the following U.S. Environmental Protection Agency Reference:

Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020, March 1979, Revised 1983, U.S. Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268.

Federal Register, 40 CFR Part 136: Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act. Revised July 1992.

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. Third Edition, Revised December 1996, U.S. EPA SW-846.

Annual Book of ASTM Standards, Volume II. ASTM, 100 Harbor Drive, West Conshohocken, PA 19428-2959.

Standard Methods for the Examination of Water and Wastewater. (20th Edition). American Public Health Association, 1105 18th Street, NW, Washington, D.C. 20036.

#### ORGANIC DATA QUALIFIERS

- U Indicates compound was analyzed for but not detected.
- J Indicates an estimated value. This flag is used to qualify the following: when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed; a compound is detected in the sample but the result is less than the method quantitation limit but greater than the statistically calculated laboratory method detection limit; the result for a compound is estimated due to the analysis of a sample beyond the USEPA defined holding time; the result for a compound is estimated due to a quality control sample result that is outside the laboratory quality control recovery limits.
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as the sample.
- E This flag identifies all compounds whose concentrations exceed the calibration range of the GC/MS instrument of that specific analysis.
- This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G Matrix spike recovery is greater than the expected upper limit of analytical performance.
- L Matrix spike recovery is less than the expected lower limit of analytical performance.
- # \_ Indicates that a surrogate recovery was found to be outside the expected limits of analytical performance.
- \$ Indicates that the surrogate compound was diluted out. The sample had to be diluted to obtain analytical results and a recovery could not be calculated.
- (%) Indicates that the compound is a surrogate and that the value reported for this compound is in percent recovery. The quality control recovery limits are indicated in the detection limit or QC limits column.

#### Case Narrative

The following comments and observations were made regarding the analysis of the composite samples from the Olin Drum Project site for Sevenson Environmental Services, Inc. corresponding to the Waste Stream Technology Inc. sample group number 2002-275 and sample numbers WS72604 through WS72615 which were composited on 10/18/00;

- 1.0 Sample Number WS72612 (Cyanide Liquid)
  - 1.1 Only one Olin Drum Project sample was identified as being a cyanide containing liquid. The volume of liquid received for this sample, designated as Waste Stream Technology sample ID number WS72612 was insufficient to perform the required TCLP analyses. Since additional sample volume could not be obtained, all of the analyses to be performed on WS72612 were canceled.
- 2.0 Sample Number WS72613 (Oily Liquid)
  - 2.1 Sample number WS72613 was an oily liquid that was not amenable to TCLP filtration, Subsequently, waste dilution analyses had to be performed on the sample. The results for sample number WS72613 are, therefore, reported on a weight per unit weight basis (i.e.,  $\mu g/kg$  or mg/kg basis).
- 3.0 Sample Number WS72615 (Water Soluble Liquid)
  - 2.1 Sample number WS72615 was a water soluble liquid that was not amenable to TCLP filtration, Subsequently, the TCLP analyses were performed on the unfiltered sample. As such, the TCLP date was listed as NA on the TCLP result report sheets.

Daniel W. Vollmer

QA/QC Officer

Date 11300



### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

Service Agreement on File? XYES  Hazardous XNon-Hazardous A. Waste Generator Information		Profile Number: V Renewal Date:	имі <u>CN58/9</u>
3. Facility Street Address: 51 67 5. Facility City: LILMINGTO 7. Zip/Postal Code: 01887 9. County: 11. Customer Name: 010 60		10. State/Province ID#: 12. Customer Phone: (Y)	1D#: MAD OOLYO 316 23) 376-4511 3-736-4166 MSame as above
B. Waste Stream Information  1. Description a. Name of Waste: FINMER b. Process Generating Waste:  DRUM # 13, 9, 10	13, 47, 15, 11	1,57	
c. Color d. Strong odor (describe):	⊠Solid □	@ 70°F   f. Layers  Liquid   ⊠Single Layer  Sludge   □Multi-layer	g. Free liquid range to % h. pH: Range to 6.11 %
j. Chemical Composition (List all consposition representation)	ive analysis):	anics, debris, and UHC's] present in any cor	Not applicable scentration and submit
Constituents  REACTIVE SUCIELOE  FLASK POINT  BENZENS  LRESOL	Concentration Range 0-95 PPM 86 F 0-46 PPb 0-23 PPb	Constituents DRUM PHATS/DEBRIS SOLIDS SEE ATTACKED TCL ANALYTICA LUS 7260	
k. Oxidizer Pyr Carcinogen Infe I. Does the waste represented by the notification? (list in Section B.1.j) m. Does the waste represented by the notification on the waste represented by the number of the waste represented by the liftyes.  o. Does the waste represented by the liftyes, concentration on yellow yellow.	ophoric   Expectious   She citious   She cit	EQUAL OR EXCEED 100%  colosive	ve active A
If no, does the waste contain <50	ganic LDR Exemption? 0 ppmw volatile organic (V ppm	O)?	MAES DNO
<ul><li>r. Does the waste contain debris? (</li><li>2. Quantity of Waste Estimated Annual Volume</li></ul>	list in Section B.1.j)	s	Syles Dino
3. Shipping Information a. Packaging:  Bulk Solid; Type/Size 110 +  Drum; Type; Size 5 C × C  b. Shipping Frequency: Units c. Is this a U.S. Department of Trans	Com Ourk PRZ Per:	☐Bulk Liquid; Type/Size: ☐Other: Month ☐Quarter ☐Year ѬOne t	ime Mother



## GENERATOR'S WASTE PROFILE SHEET PLEASE PRINT IN INK OR TYPE

(	i. Reportable Quantity (lbs.;kgs.):		Hazard Class/ID #: 4.	
1	. USDOT Shipping Name: 日本四	MARKE SULIOS CREMA	ic, NO.S., 4.1, UN 132.	<u>5, PC, :</u>
	<ol> <li>Personal Protective Equipment F</li> </ol>	Requirements:		
1	n. Transporter/Transfer Station:			
	enerator's Certification (Please ch	eck appropriate responses, sign, a	nd date below )	
				<u> </u>
1.	Is this a USEPA hazardous waste (4	O CFR Part 261)? If the answer is no, s	skip to 2	□YES (Mar
	a. If yes, identify ALL USEPA liste	d and characteristic waste code numbe	irs (D, F, K, P, U)	
	h. If a share-design horanicus we	ste, do underlying hazardous constituer	440	
		tion B.1.j)		
		(if yes, list size and type in Chemical		•
	Composition - B.1.)		DYES DNO	
2.			***************************************	□YES Ø
	Identify ALL state hazardous waste c	0000		
3.			ean-up?	GEYES []
	If yes, attach Record of Decision (ROD	), 104/106 or 122 order or count order t	that governs site clean-up	,
	activity. For state mandated clean-up,	provide relevant documentation. W	DEP 21E SITE # 03-0	2 4 7 1
4.	Does the waste represented by this wa	ste profile sheet contain radioactive m	aterial or is disposal	
•		ommission?		TYES
5.		iste profile sheet contain concentration		
		R 761? (if yes, list in Chemical Composi the U.S.?		□YES 29N
	a. If yes, were the roots imported after	· Billi har-har. I urrusminarararananatarioustrasionanananapsissippa		
6.	Do the waste profile sheet and all attac	chments contain true and accurate desc	criptions of the waste	į
		on within the possession of the Genera		
	suspected hazards pertaining to the wa	aste been disclosed to the Contractor?.		MAES LIV
7.	Will all changes which occur in the cha	racter of the waste be identified by the	Canarator and disclosed	:
• •				BYES □N
Пспе	ck here if a Certificate of Destruction	i or Disposal is required.		į.
Any sa	mple submitted is representative as defir	ned in 40 CFR 261 - Appendix I or by u	sing an equivalent method. I authorize Wi	/ to obtain a
sample	from any waste shipment for purposes of	of recentification. If this certification is n	nade by a broker, the undersigned signs as	s authorized
agent o	i the generator and has confirmed the in	formation contained in this Profile Shee	et from information provided by the general nent, Contractor has all the necessary per	ior and additing
license	s for the waste that has been characterize	ed and identified by this approved profi	le	mas <b>enc</b>
	<i>179</i>	111		
	cation Signature:	Marin	Title: PRINCIPAL GB	
Name		MORROW Company Name:	OLIN CORPLANTIOND	ate: 1(
	[Z] Check	if additional information is attached	d. Indicate the number of attached pa	iges [ /
1.	Management's Decision Management Method ■Landfill	Chier horosteur Califfeetie	FOR WM L	
١.		□Non-hazardous Solidification  Stabilization □Other (Specify	☐Bioremediation ☐Incinerati	on
2.	Proposed Ultimate Management F	*****		
3.		ocedures, or Limitation on Approva	3.	
₩.		vocaures, or minitation on Approva	1.	
				······································
4.	Waste Form	5. Source	6. System Type	
Specia	Waste Decision			Disapprove
	erson's Signature:		Date:	1 minmbers A.s.
	n Approval Signature (Optional):		Date:	
	Waste Approvals Person Signature	<b>)</b>	Date:	***************************************
******************				

302 Grote Street Buffalo, NY 14207 (716) 876-5290

#### Analytical Data Report

Group Number: 2002-275

Site: Olin - Drum Phase

## Field and Laboratory Information

			Date	Date	
WST ID	Client ID	Matrix	Sampled	Received	Time
WS72604	Cyanide Solids	Solid	10/16/00	10/16/00	11:00
WS72605	Cyanide & Sulfide Solids	Solid	10/16/00	10/16/00	11:00
WS72606	Sulfide	Solid	10/16/00	10/16/00	11:00
WS72607	Flammable Resins / Solids	Solid	10/16/00	10/16/00	11:00
WS72608	+Cu	Solid	10/16/00	10/16/00	11:00
WS72609	Partially/Slightly H2O sol.Resins&Solids	Solid	10/16/00	10/16/00	11:00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	Solid	10/16/00	10/16/00	11:00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	Solid	10/16/00	10/16/00	11:00
WS72613	Oily Liquid	Oil	10/16/00	10/16/00	11:00
WS72614	Mixed Resins & Solids	Solid	10/16/00	10/16/00	11:00
WS72615	Water Sol. Liquid	Aqueous	10/16/00	10/16/00	11:00

#### Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	40.0	Not detected	10/19/00
WS72605	Cyanide & Sulfide Solids	40.0	360	10/19/00
WS72606	Sulfide	40.0	126	10/19/00
→ WS72607	Flammable Resins / Solids	40.0	94.8	10/19/00
WS72608	+Cu	40.0	48.2	10/20/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	40.1	10/20/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00
WS72613	Oily Liquid	40.0	Not detected	10/20/00
WS72614	Mixed Resins & Solids	40.0	42.3	10/20/00

# Waste Stream Technology, Inc. Ignitability (flash point) SW-846 1010

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

Group Number: 2002-275

Matrix: Solid Units: \* F

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	NA NA	98.6	10/23/00
WS72605	Cyanide & Sulfide Solids	NA	113	10/23/00
WS72606	Sulfide	NA	77.0	10/23/00
<del>-&gt;</del> WS72607	Flammable Resins / Solids	NA	86.0	10/23/00
WS72608	+Cu	NA	82.4	10/23/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	>200	10/23/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA	100	10/23/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA	117	10/23/00

#### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	40.0	Not detected	10/19/00
WS72605	Cyanide & Sulfide Solids	40.0	Not detected	10/19/00
WS72606	Sulfide	40.0	Not detected	10/19/00
→ WS72607	Flammable Resins / Solids	40.0	Not detected	10/19/00
WS72608	+Cu	40.0	Not detected	10/20/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	Not detected	10/20/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00
WS72613	Oily Liquid	40.0	Not detected	10/20/ <b>0</b> 0
WS72614	Mixed Resins & Solids	40.0	Not detected	10/20/00

#### Waste Stream Technology, Inc. pH in Solid SW-846 9045C

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid
Units: pH Units

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	NA	6.24	10/17/00
WS72605	Cyanide & Sulfide Solids	NA	7.60	10/17/00
WS72606	Sulfide	NA	7.75	10/17/00
▶ WS72607	Flammable Resins / Solids	NA	6.11	10/17/00
WS72608	+Cu	NA	4.00	10/17/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	7.92	10/17/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	. NA	6.03	10/17/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA	7.18	10/17/00
WS72613	Oily Liquid	NA	8.49	10/17/00
WS72614	Mixed Resins & Solids	NA	2.82	10/17/00

#### TCLP Volatile Organics Analysis 1311/8260B

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: µg/L

Matrix: TCLP Extra

WST ID: WS72607

Client ID: Flammable Resins / Solids

TCLP Date: 10/24/00 Date Analyzed: 10/25/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
vinyl chloride	100	Not detected	-	U
1,1-dichloroethene	50	Not detected		U
chloroform	<b>5</b> 0	Not detected	,	U
2-butanone	1000	Not detected		U
1,2-dichloroethane	50	Not detected		U
carbon tetrachloride	50	Not detected		U
trichloroethene	50	Not detected		U
penzene	50	46		J
etrachloroethene	50	Not detected		U
chlorobenzene	<b>5</b> 0	Not detected		U
1,4-dichlorobenzene	50	Not detected		U
1,2-Dichloroethane-d4 (%)	•	10 <b>0</b>	70-121	
Toluene-d8 (%)		100	81-117	
Bromofluorobenzene (%)		94	74-121	

Dilution Factor

## 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 10/16/00

Date Received: 10/16/00

TCLP Extraction Date: 10/18/00

Group Number: 2002-275

Units: µg/L

Matrix: TCLP Extract

WST ID: WS72607

Client ID: Flammable Resins / Solids

Extraction Date: 10/24/00 Date Analyzed: 10/25/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
pyridine	50.0	Not detected		U
1,4-dichlorobenzene	50.0	Not detected		U
Total cresols(o,m & p)	150	23		J
nitrobenzene	50.0	Not detected		U
hexachloroethane	50.0	Not detected	•	U
hexachlorobutadiene	50.0	Not detected		U
2,4,6-trichlorophenol	50.0	Not detected		U
2,4,5-trichlorophenol	50.0	Not detected		U
2,4-dinitrotoluene	50.0	Not detected		U
hexachlorobenzene	50.0	Not detected		U
pentachlorophenol	250	Not detected	·	U
2-Fluorophenol (%)		60	21-100	
Phenol-d6 (%)		27	10-94	
Nitrobenzene-d5 (%)		81	35-114	
2-Fluorobiphenyl (%)		77	43-116	
2,4,6-Tribromophenol (%)		97	10-123	
Terphenyl-d14 (%)		99	33-141	

**Dilution Factor** 

#### TCLP Pesticide Analysis 1311/8081

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/18/00

Group Number: 2002-275

Units: µg/L

Matrix: TCLP Extraσ

WST ID: WS72607

lient ID: Flammable Resins / Solids

Extraction Date: 10/26/00 Date Analyzed: 10/28/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chiordane	0.350	Not detected	,	Ü
endrin	0.055	Not detected		U
gamma-BHC (Lindane)	0.016	Not detected		U
heptachlor	0.097	Not detected		U
heptachlor epoxide	0.042	Not detected		U
methoxychlor	0.031	Not detected		U
toxaphene	1.540	Not detected		U
Tetrachloro-m-xylene (%)		101	60-150	
Decachlorobiphenyl (%)		80	60- 150	

Dilution Factor

#### Herbicides in TCLP Extract 1311/8150

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/18/00

Group Number: 2002-275

Units: mg/L Matrix: TCLP Extract

WST ID: WS72607

lient ID: Flammable Resins / Solids

Extraction Date: 10/24/00 Date Analyzed: 10/26/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
2,4-D	0.02	Not detected '		U
2,4,5-TP (Silvex)	0.02	Not detected		U
2,4-DCPAA (%)		43	10- 127	

**Dilution Factor** 

## Waste Stream Technology, Inc. TCLP Metals Analysis Result Report

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: mg/L

Matrix: TCLP Extrac

TCLP Extraction Date: 10/18/00

WST ID: WS72607

Client ID: Flammable Resins / Solids

Digestion Date: 10/20/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	0.045	0.057	10/20/00	SW-846 6010
Barium by ICP	0.025	0.083	10/20/00	SW-846 6010
Cadmium by ICP	√0.025	Not detected	10/20/00	SW-846 6010
Chromium by ICP	0.025	Not detected	10/20/00	SW-846 6010
Copper by ICP	0.045	0.098	10/20/00	SW-846 6010
Lead by ICP	0.075	Not detected	10/20/00	SW-846 6010
Mercury by Cold Vapor	0.001	Not detected	10/23/00	SW-846 7470
Nickel by ICP	0.025	Not detected	10/20/00	SW-846 6010
Selenium by ICP	0.095	Not detected	10/20/00	SW-846 6010
Silver by ICP	0.025	Not detected	10/20/00	SW-846 6010
Zinc by ICP	0.065	0.097	10/20/00	SW-846 6010

PCBs in Soil SW-846 8082

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: mg/Kg Matrix: Solid

WST ID: WS72607

Client ID: Flammable Resins / Solids

Extraction Date: 10/27/00 Date Analyzed: 10/27/00

Compound	<b>Detection Limit</b>	Result	QC Limits (%)	Qualifier
aroclor 1016	0.750	Not detected		U
aroclor 1221	0.600	Not detected	,	U
aroclor 1232	0.900	Not detected		U
aroclor 1242	0.450	Not detected		U
aroclor 1248	0.300	Not detected		U
aroclor 1254	0.150	Not detected		U
aroclor 1260	0.150	Not detected		U
Decachlorobiphenyl (%)		93	60- 150	
Tetrachloro-m-xylene (%)		81	60-150	

Dilution Factor 15

#### **METHODOLOGIES**

The specific methodologies employed in obtaining the analytical data reported are indicated on each of the result forms. The method numbers shown refer to the following U.S. Environmental Protection Agency Reference:

Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020, March 1979, Revised 1983, U.S. Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268.

Federal Register, 40 CFR Part 136: Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act. Revised July 1992.

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. Third Edition, Revised December 1996, U.S. EPA SW-846.

Annual Book of ASTM Standards, Volume II. ASTM, 100 Harbor Drive, West Conshohocken, PA 19428-2959.

Standard Methods for the Examination of Water and Wastewater. (20th Edition). American Public Health Association, 1105 18th Street, NW, Washington, D.C. 20036.

#### ORGANIC DATA QUALIFIERS

- U Indicates compound was analyzed for but not detected.
- J Indicates an estimated value. This flag is used to qualify the following: when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed; a compound is detected in the sample but the result is less than the method quantitation limit but greater than the statistically calculated laboratory method detection limit; the result for a compound is estimated due to the analysis of a sample beyond the USEPA defined holding time; the result for a compound is estimated due to a quality control sample result that is outside the laboratory quality control recovery limits.
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as the sample.
- E This flag identifies all compounds whose concentrations exceed the calibration range of the GC/MS instrument of that specific analysis.
- **D** This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- **G** Matrix spike recovery is greater than the expected upper limit of analytical performance.
- Matrix spike recovery is less than the expected lower limit of analytical
   performance.
- #\_ Indicates that a surrogate recovery was found to be outside the expected limits of analytical performance.
- \$ Indicates that the surrogate compound was diluted out. The sample had to be diluted to obtain analytical results and a recovery could not be calculated.
- (%) Indicates that the compound is a surrogate and that the value reported for this compound is in percent recovery. The quality control recovery limits are indicated in the detection limit or QC limits column.

#### Case Narrative

The following comments and observations were made regarding the analysis of the composite samples from the Olin Drum Project site for Sevenson Environmental Services, Inc. corresponding to the Waste Stream Technology Inc. sample group number 2002-275 and sample numbers WS72604 through WS72615 which were composited on 10/18/00;

- 1.0 Sample Number WS72612 (Cyanide Liquid)
  - 1.1 Only one Olin Drum Project sample was identified as being a cyanide containing liquid. The volume of liquid received for this sample, designated as Waste Stream Technology sample ID number WS72612 was insufficient to perform the required TCLP analyses. Since additional sample volume could not be obtained, all of the analyses to be performed on WS72612 were canceled.
- 2.0 Sample Number WS72613 (Oily Liquid)
  - 2.1 Sample number WS72613 was an oily liquid that was not amenable to TCLP filtration, Subsequently, waste dilution analyses had to be performed on the sample. The results for sample number WS72613 are, therefore, reported on a weight per unit weight basis (i.e.,  $\mu$ g/kg or mg/kg basis).
- 3.0 Sample Number WS72615 (Water Soluble Liquid)
  - 2.1 Sample number WS72615 was a water soluble liquid that was not amenable to TCLP filtration, Subsequently, the TCLP analyses were performed on the unfiltered sample. As such, the TCLP date was listed as NA on the TCLP result report sheets.

Danie W. Vou	Date	11/3/00
Daniel W. Vollmer		
ON/OC Officer		



## GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

Sei	vice Agreement on File? YES	NO PLEASE FRINT IN	Profile Number: Wi	CN6880
		TSCA	Renewal Date:	
Ā	Waste Generator Information		4	<u></u>
1. 3. 5. 7. 9. 11. 13.	Generator Name: OLIN C Facility Street Address: 51 Facility City: WILMINGTO Zip/Postal Code: OLINT County: Customer Name: OLIN C	G SOLLOS  DRUM EXCRUATE	14. Customer Fax: V23	
	33			
	c. Color d. Strong odo (describe):	[▼Solid [	e @ 70°F f. Layers ]Liquid	g. Free liquid range to % h. pH: Range to <i>&amp;</i> . 2 년 %
,	i. Liquid Flash Point: □<73°F	73-99°F100-139°F	☐140-199°F ☐≥ 200°F	StNot applicable
	j. Chemical Composition (List all con		anics, debris, and UHC's present in any cond	entration and submit
	Constituents	Concentration Range	Constituents	Concentration Range
	FLASH POINT	98.6°F	DRUM PARTS DEBRUS	0-507
	CR650L	0-113 PPh	SEE ATTHERED TELI	50-1007.
	₹1xc	0-0.644 P/M	RABLYSIS WS 72604	
	<b>B</b> IO1	AL COMPOSITION MUST	EQUAL OR EXCEED 100%	
	k. Oxidizer Py	rophonc Ex ectious Sh	plosive ☐Radioactiv ock Sensitive ☐Water Rea ne carcinogens which require OSH/	ctive
	m. Does the waste represented by n. Does the waste represented by	this profile contain dioxins? this profile contain asbesto		□YES ØNO
	o. Does the waste represented by	this profile contain benzene	??	□YES KINO
	p. Is the waste subject to RCRA Solif no, does the waste meet the c	ubpart CC controls? organic LDR Exemption? 00 ppmw volatile organic (\	/0)?	DYES ZINO
	<ul><li>q. Does the waste contain any Cla</li><li>r. Does the waste contain debris?</li></ul>		ting substances?	
2.	Quantity of Waste Estimated Annual Volume		ns ⊟Yards. ∰Drums ⊟Other (s	pecify)
3.	Shipping Information  a. Packaging:  ☐Bulk Solid; Type/Size: ☐Drum; Type; Size: 13-25 C  b. Shipping Frequency: Units	HLLUN OVERPHC	Bulk Liquid; Type/Size: Other: _MonthQuarterYear Mone t	me ∏Other
			rdous Material? (If no, skip d, e, an	



## GENERATOR'S WASTE PROFILE SHEET PLEASE PRINT IN INK OR TYPE

	i. Reportable Quantity (lbs.;kgs.):  e. Hazard Class/ID#: 7-7	
f.	USDOT Shipping Name: FLAMMARLE SOLIOS ORCHNIC, N.O.S, 4.1, UN 1325,	PCA_
9		
h	n. Transporter/Transfer Station:	<u> </u>
F G	enerator's Certification (Please check appropriate responses, sign, and date below.)	
1.	Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2	TYES KIN
	b. If a characteristic hazardous waste, do underlying hazardous constituents	
	(UHCs) apply? (if yes, list in Section B.1.j)	
	c. Does this waste contain debris? (if yes, list size and type in Chemical	
	Composition - B.1.)	
2.	is this a state hazardous waste?	□YES ØN
em,	Identify ALL state hazardous waste codes	فم ت
3.	Is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up?	MES □N
	activity. For state mandated clean-up, provide relevant obcomentation. IN NOCP X1C 3763 % 3	
4.	Does the waste represented by this waste profile sheet contain radioactive material, or is disposal	
	regulated by the Nuclear Regulatory Commission?	□YES E
5.	Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated	;
<del>-</del> •	Biphenyls (PCBs) regulated by 40 CFR 761? (if yes, list in Chemical Composition - B.1.j)	TYES NO
	a. If yes, were the PCBs imported into the U.S.?	
6.	Do the waste profile sheet and all attachments contain true and accurate descriptions of the waste	
U.	material, and has all relevant information within the possession of the Generator regarding known or suspected hazards pertaining to the waste been disclosed to the Contractor?	ZYES DN
		_
7.	Will all changes which occur in the character of the waste be identified by the Generator and disclosed to the Contractor prior to providing the waste to the Contractor?	CIVES TH
		SYES N
Che	ck here if a Certificate of Destruction or Disposal is required.	
Anv sa	mple submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. I authorize WM	to obtain a
sample	from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs as a	authorized
	of the generator and has confirmed the information contained in this Profile Sheet from information provided by the generator	
	ation as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary permi Is for the waste that has been ∲ha≰acterized and identified by this approved profile.	its and
	fortane A A	_
	cation Signature: // Con // One   Title: PRIACIPAC EXU.	
Name	(Type or Print): STELE MORKOW Company Name: OLIN CORPORATIONAL	
	Check if additional information is attached. Indicate the number of attached pag	es <u>''</u>
- D- VVV	W Management's Decision  ← FOR WM US	CE CONTINUE
1.	Management Secision For WM US  Management Method   Landfill   Non-hazardous Solidification   Bioremediation   Incineration	AND DESCRIPTION OF THE PROPERTY OF THE PROPERT
i ''	☐Hazardous Stabilization ☐Other (Specify)	, 1
2.	Proposed Ultimate Management Facility:	
3.	Precautions, Special Handling Procedures, or Limitation on Approval:	<del></del>
4.	Waste Form 5. Source 6. System Type	
		)isapprove
	person's Signature: Date:	
	on Approval Signature (Optional): Date:	
تابعراد	al Waste Approvals Person Signature: Date:	·

302 Grote Street Buffalo, NY 14207 (716) 876-5290

#### Analytical Data Report

Group Number: 2002-275

Site: Olin - Drum Phase

#### Field and Laboratory Information

			Date	Date	
WST ID	Client ID	Matrix	Sampled	Received	Time
> WS72604	Cyanide Solids	Solid	10/16/00	10/16/00	11:00
WS72605	Cyanide & Sulfide Solids	Solid	10/16/00	10/16/00	11:00
WS72606	Sulfide	Solid	10/16/00	10/16/00	11:00
WS72607	Flammable Resins / Solids	Solid	10/16/00	10/16/00	11:00
WS72608	+Cu	Solid	10/16/00	10/16/00	11:00
WS72609	Partially/Slightly H2O sol.Resins&Solids	Solid	10/16/00	10/16/00	11:00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	Solid	10/16/00	10/16/00	11:00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	Solid	10/16/00	10/16/00	11:00
WS72613	Oily Liquid	Oil	10/16/00	10/16/00	11:00
WS72614	Mixed Resins & Solids	Solid	10/16/00	10/16/00	11:00
WS72615	Water Sol. Liquid	Aqueous	10/16/00	10/16/00	11:00

#### Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
→WS72604	Cyanide Solids	40.0	Not detected	10/19/00
WS72605	Cyanide & Sulfide Solids	40.0	360	10/19/00
WS72606	Sulfide	40.0	126	10/19/00
WS72607	Flammable Resins / Solids	40.0	94.8	10/19/00
WS72608	+Cu	40.0	48.2	10/20/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	40.1	10/20/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00
WS72613	Oily Liquid	40.0	Not detected	10/20/00
WS72614	Mixed Resins & Solids	40.0	42.3	10/20/00

# Waste Stream Technology, Inc. Ignitability (flash point) SW-846 1010

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: ° F

WSTID	Client ID	Detection Limit	Result	Date Analyzed
> WS72604	Cyanide Solids	NA	98.6	10/23/00
WS72605	Cyanide & Sulfide Solids	NA	113	10/23/00
WS72606	Sulfide	NA	77.0	10/23/00
WS72607	Flammable Resins / Solids	NA	86.0	10/23/00
WS72608	+Cu	NA	82.4	10/23/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	>200	10/23/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA NA	100	10/23/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA	117	10/23/00

#### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
→ WS72604	Cyanide Solids	40.0	Not detected	10/19/00
WS72605	Cyanide & Sulfide Solids	40.0	Not detected	10/19/00
WS72606	Sulfide	40.0	Not detected	10/19/00
WS72607	Flammable Resins / Solids	40.0	Not detected	10/19/00
WS72608	+Cu	40.0	Not detected	10/20/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	Not detected	10/20/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00
WS72613	Oily Liquid	40.0	Not detected	10/20/00
WS72614	Mixed Resins & Solids	40.0	Not detected	10/20/00

### Waste Stream Technology, Inc. pH in Solid sw-846 9045C

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: pH Units

WST ID	Client ID	Detection Limit	Result	Date Analyzed
→ WS72604	Cyanide Solids	NA	6.24	10/17/00
WS72605	Cyanide & Sulfide Solids	NA	7.60	10/17/00
WS72606	Sulfide	NA	7.75	10/17/00
WS72607	Flammable Resins / Solids	NA	6.11	10/17/00
WS72608	+Cu	NA	4.00	10/17/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	7.92	10/17/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA	6.03	10/17/00
WS72611	Slightly/Partially Hexane&H2O sof.Resins	NA	7.18	10/17/00
WS72613	Oily Liquid	NA	8.49	10/17/00
WS72614	Mixed Resins & Solids	NA	2.82	10/17/00

## TCLP Volatile Organics Analysis 1311/8260B

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: µg/L

Matrix: TCLP Extra

WST ID: WS72604 Client ID: Cyanide Solids TCLP Date: 10/23/00

Date Analyzed: 10/25/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
vinyl chloride	100	Not detected		U
1,1-dichloroethene	50	Not detected		U
chloroform	50	Not detected		U
2-butanone	1000	Not detected		U
1,2-dichloroethane	50	Not detected		U
carbon tetrachloride	50	Not detected		U
trichloroethene	50	Not detected		U
benzene	50	Not detected		U
tetrachloroethene	50°	Not detected		U
chlorobenzene	50	Not detected		U
1,4-dichlorobenzene	50	Not detected		U .
1,2-Dichloroethane-d4 (%)		101	70-121	
Toluene-d8 (%)		96	81-117	
Bromofluorobenzene (%)		84	74-121	

Dilution Factor

#### Waste Stream Technology, Inc. 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/17/00

Group Number: 2002-275

Units: µg/L Matrix: TCLP Extract

WST ID: WS72604 Client ID: Cyanide Solids

Extraction Date: 10/24/00 Date Analyzed: 10/24/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
pyridine	10	Not detected		Ú
1,4-dichlorobenzene	10	Not detected	•	U
Total cresols(o,m & p)	30	113		
nitrobenzene	10	Not detected		U
hexachloroethane	10	Not detected		U
hexachlorobutadiene	10	Not detected		U
2,4,6-trichlorophenol	10	Not detected		U
2,4,5-trichlorophenol	10	Not detected		U
2,4-dinitrotoluene	10	Not detected		U
hexachlorobenzene	10	Not detected		U
pentachiorophenol	50	Not detected		U
2-Fluorophenol (%)	4	56	21-100	
Phenol-d6 (%)		43	10-94	
Nitrobenzene-d5 (%)		94	35-114	
2-Fluorobiphenyl (%)		86	43-116	
2,4,6-Tribromophenol (%)		57	10-123	
Terphenyl-d14 (%)		95	33-141	

Dilution Factor

#### **TCLP Pesticide Analysis** 1311/8081

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/17/00

Group Number: 2002-275

Units: µg/L
Matrix: TCLP Extra

WST ID: WS72604

Client ID: Cyanide Solids

Extraction Date: 10/25/00 Date Analyzed: 10/28/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chlordane	0.350	Not detected		U
endrin	0.055	Not detected	·	Ų
gamma-BHC (Lindane)	0.016	Not detected		U
neptachlor	0.097	Not detected		U
neptachlor epoxide	0.042	Not detected		U
methoxychlor	0.031	Not detected		U
oxaphene	1.540	Not detected	•	U
Tetrachloro-m-xylene (%)		35	60-150	#
Decachlorobiphenyl (%)		77	60-150	

**Dilution Factor** 

## Herbicides in TCLP Extract 1311/8150

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/17/00

Group Number: 2002-275

Units: mg/L

Matrix: TCLP Extract

WST ID: WS72604

Client ID: Cyanide Solids

Extraction Date: 10/24/00 Date Analyzed: 10/25/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
2,4-D	0.02	Not detected	,	U
2,4,5-TP (Silvex)	0.02	Not detected	1	U
2,4-DCPAA (%)		82	10-127	
Dilution Factor 1	The state of the s	***************************************		

## Waste Stream Technology, Inc. TCLP Metals Analysis Result Report

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: mg/L

Matrix: TCLP Extrac

TCLP Extraction Date: 10/17/00

WST ID: WS72604 Client ID: Cyanide Solids

Digestion Date: 10/19/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	0.045	Not detected	10/19/00	SW-846 6010
Barium by ICP	0.025	0.057	10/19/00	SW-846 6010
Cadmium by ICP	0.025	Not detected	10/19/00	SW-846 6010
Chromium by ICP	0.025	Not detected	10/19/00	SW-846 6010
Copper by ICP	0.045	Not detected	10/19/00	SW-846 6010
Lead by ICP	0.075	Not detected	10/19/00	SW-846 6010
Mercury by Cold Vapor	0.001	Not detected	10/23/00	SW-846 7470
Nickel by ICP	0.025	Not detected	10/19/00	SW-846 6010
Selenium by ICP	0.095	Not detected	10/19/00	SW-846 6010
Silver by ICP	0.025	Not detected	10/19/00	SW-846 6010
Zinc by ICP	0.065	0.644	10/19/00	SW-846 6010

PCBs in Soil SW-846 8082

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: mg/Kg Matrix: Solid

WST ID: WS72604 Client ID: Cyanide Solids

Extraction Date: 10/27/00 Date Analyzed: 10/27/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier	
aroclor 1016	0.750	Not detected		U	
aroclor 1221	0.600	Not detected		U	
aroclor 1232	0.900	Not detected	U		
aroclor 1242	0.450	Not detected		U	
aroclor 1248	0.300	Not detected		U	
aroclor 1254	0.150	Not detected		U	
aroclor 1260	0.150	Not detected		U	
Decachlorobiphenyl (%)		85	60- 150		
Tetrachloro-m-xylene (%)		84	60-150		

Dilution Factor 15

#### **METHODOLOGIES**

The specific methodologies employed in obtaining the analytical data reported are indicated on each of the result forms. The method numbers shown refer to the following U.S. Environmental Protection Agency Reference:

Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020, March 1979, Revised 1983, U.S. Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268.

Federal Register, 40 CFR Part 136: Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act. Revised July 1992.

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. Third Edition, Revised December 1996, U.S. EPA SW-846.

Annual Book of ASTM Standards, Volume II. ASTM, 100 Harbor Drive, West Conshohocken, PA 19428-2959.

Standard Methods for the Examination of Water and Wastewater. (20th Edition). American Public Health Association, 1105 18th Street, NW, Washington, D.C. 20036.

#### ORGANIC DATA QUALIFIERS

- U Indicates compound was analyzed for but not detected.
- J Indicates an estimated value. This flag is used to qualify the following: when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed; a compound is detected in the sample but the result is less than the method quantitation limit but greater than the statistically calculated laboratory method detection limit; the result for a compound is estimated due to the analysis of a sample beyond the USEPA defined holding time; the result for a compound is estimated due to a quality control sample result that is outside the laboratory quality control recovery limits.
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as the sample.
- E This flag identifies all compounds whose concentrations exceed the calibration range of the GC/MS instrument of that specific analysis.
- D This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- **G** Matrix spike recovery is greater than the expected upper limit of analytical performance.
- L Matrix spike recovery is less than the expected lower limit of analytical performance.
- # \_ Indicates that a surrogate recovery was found to be outside the expected limits of analytical performance.
- \$ Indicates that the surrogate compound was diluted out. The sample had to be diluted to obtain analytical results and a recovery could not be calculated.
- (%) Indicates that the compound is a surrogate and that the value reported for this compound is in percent recovery. The quality control recovery limits are indicated in the detection limit or QC limits column.

#### Case Narrative

The following comments and observations were made regarding the analysis of the composite samples from the Olin Drum Project site for Sevenson Environmental Services, Inc. corresponding to the Waste Stream Technology Inc. sample group number 2002-275 and sample numbers WS72604 through WS72615 which were composited on 10/18/00;

- 1.0 Sample Number WS72612 (Cyanide Liquid)
  - 1.1 Only one Olin Drum Project sample was identified as being a cyanide containing liquid. The volume of liquid received for this sample, designated as Waste Stream Technology sample ID number WS72612 was insufficient to perform the required TCLP analyses. Since additional sample volume could not be obtained, all of the analyses to be performed on WS72612 were canceled.
- 2.0 Sample Number WS72613 (Oily Liquid)
  - 2.1 Sample number WS72613 was an oily liquid that was not amenable to TCLP filtration, Subsequently, waste dilution analyses had to be performed on the sample. The results for sample number WS72613 are, therefore, reported on a weight per unit weight basis (i.e.,  $\mu q/kq$  or mq/kq basis).
- 3.0 Sample Number WS72615 (Water Soluble Liquid)
  - 2.1 Sample number WS72615 was a water soluble liquid that was not amenable to TCLP filtration, Subsequently, the TCLP analyses were performed on the unfiltered sample. As such, the TCLP date was listed as NA on the TCLP result report sheets.

Daniel W. Vollmer
QA/QC Officer

Date 1/3/00



#### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

Sar	vice Agreement on File? XYES	INO	Profile Number: W	MI CNPSST
		TSCA	Renewal Date:	
	Waste Generator Information			
			2. SiC Code: 역약액역	
1.	***************************************	CURPURKTION	<u> </u>	
3.	Facility Street Address: 51 E		4. Phone: (978)658	- 6(2/
<b>5</b> .	Facility City: <u>ראוא אווי</u>		6. State/Province: M M	
, <b>7.</b>	Zip/Postal Code:	??7	•	ID#: M # D 00 1 4 0 316 4
9.	County:		10. State/Province ID #:	
11.		RPORATION		23) 334-4511
13.	***************************************	MORROW	14. Customer Fax: <u>423</u>	- 376 - 4166
	Billing Address			⊴ Same as above
	Waste Stream Information		A.	<u> </u>
1.	Description			
		ide & Sultide		
	b. Process Generating Waste:	DRUM CECHUR	7( a 2)	•
		<i> </i>		
	DRUM # 135, 40	<u>, 25, 28, 34, 24</u>		
(	C-lear de Steona ade	or e. Physical state	@ 70°F   f. Layers	g. Free liquid range
	c. Color d. Strong odd	<u> </u>	Tuguid Single Layer	to %
	(describe):		Sludge	,,
	CHEMIC		loinnde Minimakei	h. pH: Range
- 1		Other		to 7.60 %
l				10 1740 /
	i. Liquid Flash Point: □<73°F	□73-99°F □100-139°F	☐ 140-199°F ☐≥ <b>200</b> °F	☐Not applicable
	j. Chemical Composition (List all ∞	nstituents (including halogenated org	anics, debris, and UHC's) present in any con	centration and submit
	represent	ative analysis):		
ſ	Constituents	Concentration Range	Constituents	Concentration Range
	_	0-360 PPM	DRUM PARTS/ DETERCS	0-547.
	REACTION SUCTEION	113 °F	50405	50- (60 7.
ŀ	FLUSIE POINT	O-ILO PPM	SEE ATTACKED TO	
ŀ	CRESOL EINC	0-0.182 P/M	MANLYSIS WS 72605	
L	<u> </u>		EQUAL OR EXCEED 100%	
			plosive	
•			ock Sensitive	
			ne carcinogens which require OSH	A STATE STATE
	notification? (list in Section B.1.			DYES KINO
	m. Does the waste represented by			
	· · · · · · · · · · · · · · · · · · ·	•	s?	<del></del>
			friable nor	
	o. Does the waste represented by	*	·	DYES ZINO
	If yes, concentration	ppm	HAP?	
	•	•		<del></del>
	p. Is the waste subject to RCRA S			
			/O)?	
	Volatile organic concentration		,	VYES ONO
	volatile organic concentration _	pp	FIAA	
	q. Does the waste contain any Cla	iss I or Class II ozone-deple	ting substances?	YES MO
		•		·
2.	Quantity of Waste			
	Estimated Annual Volume	<b></b> □Tol	ns	pecny)
3.	Shipping Information			
<del></del>	a. Packaging:		•	٠
	□Bulk Solid; Type/Size: 2 -	110 CHLLON	☐Bulk Liquid; Type/Size:	
	DDrum; Type; Size:4-856	WON STEND DUEND		•
	b. Shipping Frequency: Units	<i>G</i> Per: F	Month □Quarter □Year ⊠One	time ∏Other
	c. Is this a U.S. Department of Tra			
	and the contract of the contra		the contract of the same of the contract of th	



## GENERATOR'S WASTE PROFILE SHEET PLEASE PRINT IN INK OR TYPE

_	d. Reponable Quantity (ibs.;kgs.):  e. mazard Class/IU #:	
•		325, PC
	g. Personal Protective Equipment Requirements:	
r	h. Transporter/Transfer Station:	
	enerator's Certification (Please check appropriate responses, sign, and date below.)	
1.	Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2	☐YES KONO
	a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D, F, K, P, U)	·
	b. If a characteristic hazardous waste, do underlying hazardous constituents	•
	(UHCs) apply? (if yes, list in Section B.1.j)	
	c. Does this waste contain debris? (if yes, list size and type in Chemical  Composition - B.1.)   YES  NO	
	Composition - B.1.)	:
2.	Is this a state hazardous waste?	□YES Ø
	Identify ALL state hazardous waste codes	
3.	Is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up?	ØYES □
•	the second of th	
	activity. For state mandated clean-up, provide relevant documentation. MKDEP 216 5176 # 03	-0411
4.	Does the waste represented by this waste profile sheet contain radioactive material, or is disposal	
₩.	regulated by the Nuclear Regulatory Commission?	□YES DEN
5.	Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated	
	Biphenyls (PCBs) regulated by 40 CFR 7617 (if yes, list in Chemical Composition - B.1.j)	□YES Ø
	a. If yes, were the Pops and order into the order.	
6.	Do the waste profile sheet and all attachments contain true and accurate descriptions of the waste	
	material, and has all relevant information within the possession of the Generator regarding known or	
	suspected hazards pertaining to the waste been disclosed to the Contractor?	ØYES □NC
7.	Will all changes which occur in the character of the waste be identified by the Generator and disclosed	
	to the Contractor prior to providing the waste to the Contractor?	ØYES □
□Che	eck here if a Certificate of Destruction or Disposal is required.	
	ample submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. I authorize W	
	e from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs a of the generator and has confirmed the information contained in this Profile Sheet from information provided by the genera	
	ation as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary pe	
license	es for the waste that has been/characterized and identified by this approved profile.	
Certific	ication Signature: Now Moncon Title: PRINCIPHE EX	Ju. SPEC.
		ate: 11/15
	Check if additional information is attached. Indicate the number of attached p	
D. W		JSE ONLY
1.	Management Method   Landfill   Non-hazardous Solidification   Bioremediation   Incineral	tion
	Hazardous Stabilization Other (Specify)	
2.	Proposed Ultimate Management Facility:	
3.	Precautions, Special Handling Procedures, or Limitation on Approval:	
. ا	Wasse Care	
4.	Waste Form 5. Source 6. System Type	
		□Disapproved
	person's Signature: Date:	
	al Waste Approvals Person Signature:  Date:	

#### Waste Stream Technology, Inc.

302 Grote Street Buffalo, NY 14207 (716) 876-5290

#### Analytical Data Report

Group Number: 2002-275

Site: Olin - Drum Phase

#### Field and Laboratory Information

	•		Date	Date	
WST ID	Client ID	Matrix	Sampled	Received	Time
WS72604	Cyanide Solids	Solid	10/16/00	10/16/00	11:00
→WS72605	Cyanide & Sulfide Solids	Solid	10/16/00	10/16/00	11:00
WS72606	Sulfide	Solid	10/16/00	10/16/00	11:00
WS72607	Flammable Resins / Solids	Solid	10/16/00	10/16/00	11:00
WS72608	+Cu	Solid	10/16/00	10/16/00	11:00
WS72609	Partially/Slightly H2O sol.Resins&Solids	Solid	10/16/00	10/16/00	11:00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	Solid	10/16/00	10/16/00	11:00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	Solid	10/16/00	10/16/00	11:00
WS72613	Oily Liquid	Oil	10/16/00	10/16/00	11:00
WS72614	Mixed Resins & Solids	Solid	10/16/00	10/16/00	11:00
WS72615	Water Sol. Liquid	Aqueous	10/16/00	10/16/00	11:00

#### Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	40.0	Not detected	10/19/00
—>√WS72605	Cyanide & Sulfide Solids	40.0	360	10/19/00
WS72606	Sulfide	40.0	126	10/19/00
WS72607	Flammable Resins / Solids	40.0	94.8	10/19/00
WS72608	+Cu	40.0	48.2	10/20/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	40.1	10/20/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00
WS72611	Slightly/Partially Hexane&H2O sol. Resins	40.0	Not detected	10/20/00
WS72613	Oily Liquid	40.0	Not detected	10/20/00
WS72614	Mixed Resins & Solids	40.0	42.3	10/20/00

# Waste Stream Technology, Inc. Ignitability (flash point) SW-846 1010

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: \*F

WSTID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	NA	98.6	10/23/00
→WS72605	Cyanide & Sulfide Solids	NA	113	10/23/00
W <b>S</b> 72606	Sulfide	NA	77.0	10/23/00
WS72607	Flammable Resins / Solids	NA	86.0	10/23/00
WS72608	+Cu	NA	82.4	10/23/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA	>200	10/23/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA	100	10/23/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA	117	10/23/00

#### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Matrix: Solid Units: mg/Kg

	WST ID	Client ID	Detection Limit	Result	Date Analyzed
	WS72604	Cyanide Solids	40.0	Not detected	10/19/00
<b>&gt;</b>	WS72605	Cyanide & Sulfide Solids	40.0	Not detected	10/19/00
	WS72606	Sulfide	40.0	Not detected	10/19/00
	WS72607	Flammable Resins / Solids	40.0	Not detected	10/19/00
	WS72608	+Cu	40.0	Not detected	10/20/00
	WS72609	Partially/Slightly H2O sol.Resins&Solids	40.0	Not detected	10/20/00
	WS72610	Slightly/Partially Hexane sol.Resins&Sol	40.0	Not detected	10/20/00
	WS72611	Slightly/Partially Hexane&H2O sol.Resins	40.0	Not detected	10/20/00
	WS72613	Oily Liquid	40.0	Not detected	10/20/00
	WS72614	Mixed Resins & Solids	40.0	Not detected	10/20/00

#### Waste Stream Technology, Inc. pH in Solid SW-846 9045C

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

Group Number: 2002-275

Matrix: Solid Units: pH Units

WSTID	Client ID	Detection Limit	Result	Date Analyzed
WS72604	Cyanide Solids	NA	6.24	10/17/00
→ WS72605	Cyanide & Sulfide Solids	NA	7.60	10/17/00
WS72606	Sulfide	NA	7.75	10/17/00
WS72607	Flammable Resins / Solids	* NA	6.11	10/17/00
WS72608	+Cu	NA	4.00	10/17/00
WS72609	Partially/Slightly H2O sol.Resins&Solids	NA NA	7.92	10/17/00
WS72610	Slightly/Partially Hexane sol.Resins&Sol	NA	6.03	10/17/00
WS72611	Slightly/Partially Hexane&H2O sol.Resins	NA	7.18	10/17/00
WS72613	Oily Liquid	NA	8.49	10/17/00
WS72614	Mixed Resins & Solids	NA	2.82	10/17/00

#### Waste Stream Technology, Inc. TCLP Volatile Organics Analysis 1311/8260B

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: µg/L Matrix: TCLP Extra

WST ID: WS72605

Client ID: Cyanide & Sulfide Solids

TCLP Date: 10/23/00 Date Analyzed: 10/25/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
vinyl chloride	100	Not detected		U
1,1-dichloroethene	50	Not detected		U
chloroform	50	Not detected		U
2-butanone	1000	Not detected		U
1,2-dichloroethane	50	Not detected		Ų
carbon tetrachloride	50	Not detected		U
richloroethene	50	Not detected		U
penzene	50	Not detected		Ų
etrachloroethene	50	Not detected		Ų
hlorobenzene	50	Not detected		U
.4-dichlorobenzene	50	Not detected		U
,2-Dichloroethane-d4 (%)		100	70-121	
Foluene-d8 (%)		95	81-117	
Bromofluorobenzene (%)	·	101	74-121	

#### Waste Stream Technology, Inc. 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/17/00

Group Number: 2002-275

Units: µg/L

Matrix: TCLP Extract

WST ID: WS72605

Client ID: Cyanide & Sulfide Solids

Extraction Date: 10/24/00 Date Analyzed: 10/24/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
pyridine	10	Not detected		U
1,4-dichlorobenzene	<sup>'</sup> 10	Not detected		U
Total cresols(o,m & p)	30	110		
nitrobenzene	10	Not detected		U
hexachloroethane	10	Not detected		U
hexachlorobutadiene	10	Not detected	,	U
2,4,6-trichlorophenol	10	Not detected		U
2,4,5-trichlorophenol	10	Not detected		U
2,4-dinitrotoluene	10	Not detected		U
hexachlorobenzene	10	Not detected		U
pentachlorophenol	50	Not detected		U
2-Fluorophenol (%)		46	21-100	
Phenol-d6 (%)		30	10-94	
Nitrobenzene-d5 (%)	•	84	35-114	
2-Fluorobiphenyl (%)		79	43-116	
2,4,6-Tribromophenol (%)		70	10-123	
Terphenyl-d14 (%)		92	33-141	

#### Waste Stream Technology, Inc. **TCLP Pesticide Analysis** 1311/8081

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/17/00

Group Number: 2002-275

Units: µg/L

Matrix: TCLP Extrac

WST ID: WS72605

Client ID: Cyanide & Sulfide Solids Extraction Date: 10/25/00

Date Analyzed: 10/28/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifie
chlordane	0.350	Not detected		U
endrin	0.055	Not detected	•	U
gamma-BHC (Lindane)	0.016	Not detected		U
heptachlor	0.097	Not detected		U
heptachlor epoxide	0.042	Not detected		U
methoxychlor	0.031	Not detected		U
toxaphene	1.540	Not detected		U
Tetrachioro-m-xylene (%)		88	60-150	
Decachlorobiphenyl (%)		86	60-150	

#### Waste Stream Technology, Inc. Herbicides in TCLP Extract 1311/8150

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00

TCLP Extraction Date: 10/17/00

Group Number: 2002-275

Units: mg/L

Matrix: TCLP Extract

WST ID: WS72605

Client ID: Cyanide & Sulfide Solids Extraction Date: 10/24/00

Date Analyzed: 10/25/00

Compound	ě.	Detection Limit	Result	QC Limits (%)	Qualifier
2,4-D	- • •	0.02	Not detected		U
2,4,5-TP (Silvex)		0.02	Not detected		U
2,4-DCPAA (%)			98	10-127	
Dilution Factor	1	A	***************************************		······································

## Waste Stream Technology, Inc. TCLP Metals Analysis Result Report

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: mg/L

Matrix: TCLP Extract

TCLP Extraction Date: 10/17/00

WST ID: WS72605

Client ID: Cyanide & Sulfide Solids

Digestion Date: 10/19/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	0.045	Not detected	10/19/00	SW-846 6010
Barium by ICP	0.025	0.100	10/19/00	SW-846 6010
Cadmium by ICP	0.025	Not detected	10/19/00	SW-846 6010
Chromium by ICP	0.025	Not detected	10/19/00	SW-846 6010
Copper by ICP	0.045	Not detected	10/19/00	SW-846 6010
Lead by ICP	0.075	Not detected	10/19/00	SW-846 6010
Mercury by Cold Vapor	0.001	Not detected	10/23/00	SW-846 7470
Nickel by ICP	0.025	Not detected	10/19/00	SW-846 6010
Selenium by ICP	0.095	Not detected	10/19/00	SW-846 6010
Silver by ICP	0.025	Not detected	10/19/00	SW-846 6010
Zinc by ICP	0.065	0.182	10/19/00	SW-846 6010

### Waste Stream Technology, Inc.

PCBs in Soil SW-846 8082

Site: Olin - Drum Phase Date Sampled: 10/16/00 Date Received: 10/16/00 Group Number: 2002-275

Units: mg/Kg Matrix: Solid

WST ID: WS72605

Client ID: Cyanide & Sulfide Solids

Extraction Date: 10/27/00 Date Analyzed: 10/27/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
aroclor 1016	0.750	Not detected		U
aroclor 1221	0.600	Not detected		U
aroclor 1232	0.900	Not detected	•	U
arocior 1242	0.450	Not detected		U
aroclor 1248	0.300	Not detected		U
arocior 1254	0.150	Not detected		U
arocior 1260	0.150	Not detected		U
Decachlorobiphenyl (%)	,	81	60- 150	
Tetrachloro-m-xylene (%)		84	60-150	

#### **METHODOLOGIES**

The specific methodologies employed in obtaining the analytical data reported are indicated on each of the result forms. The method numbers shown refer to the following U.S. Environmental Protection Agency Reference:

Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020, March 1979, Revised 1983, U.S. Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268.

Federal Register, 40 CFR Part 136: Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act. Revised July 1992.

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. Third Edition, Revised December 1996, U.S. EPA SW-846.

Annual Book of ASTM Standards, Volume II. ASTM, 100 Harbor Drive, West Conshohocken, PA 19428-2959.

Standard Methods for the Examination of Water and Wastewater. (20th Edition). American Public Health Association, 1105 18th Street, NW, Washington, D.C. 20036.

#### ORGANIC DATA QUALIFIERS

- U Indicates compound was analyzed for but not detected.
- J Indicates an estimated value. This flag is used to qualify the following: when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed; a compound is detected in the sample but the result is less than the method quantitation limit but greater than the statistically calculated laboratory method detection limit; the result for a compound is estimated due to the analysis of a sample beyond the USEPA defined holding time; the result for a compound is estimated due to a quality control sample result that is outside the laboratory quality control recovery limits.
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- **B** This flag is used when the analyte is found in the associated blank as well as the sample.
- E This flag identifies all compounds whose concentrations exceed the calibration range of the GC/MS instrument of that specific analysis.
- **D** This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- G Matrix spike recovery is greater than the expected upper limit of analytical performance.
- L Matrix spike recovery is less than the expected lower limit of analytical performance.
- #\_ Indicates that a surrogate recovery was found to be outside the expected limits of analytical performance.
- \$ Indicates that the surrogate compound was diluted out. The sample had to be diluted to obtain analytical results and a recovery could not be calculated.
- (%) Indicates that the compound is a surrogate and that the value reported for this compound is in percent recovery. The quality control recovery limits are indicated in the detection limit or QC limits column.

#### Case Narrative

The following comments and observations were made regarding the analysis of the composite samples from the Olin Drum Project site for Sevenson Environmental Services, Inc. corresponding to the Waste Stream Technology Inc. sample group number 2002-275 and sample numbers WS72604 through WS72615 which were composited on 10/18/00;

- 1.0 Sample Number WS72612 (Cyanide Liquid)
  - 1.1 Only one Olin Drum Project sample was identified as being a cyanide containing liquid. The volume of liquid received for this sample, designated as Waste Stream Technology sample ID number WS72612 was insufficient to perform the required TCLP analyses. Since additional sample volume could not be obtained, all of the analyses to be performed on WS72612 were canceled.
- 2.0 Sample Number WS72613 (Oily Liquid)
  - 2.1 Sample number WS72613 was an oily liquid that was not amenable to TCLP filtration, Subsequently, waste dilution analyses had to be performed on the sample. The results for sample number WS72613 are, therefore, reported on a weight per unit weight basis (i.e.,  $\mu$ g/kg or mg/kg basis).
- 3.0 Sample Number WS72615 (Water Soluble Liquid)
  - 2.1 Sample number WS72615 was a water soluble liquid that was not amenable to TCLP filtration, Subsequently, the TCLP analyses were performed on the unfiltered sample. As such, the TCLP date was listed as NA on the TCLP result report sheets.

Daniel W. Vollmer

OA/OC Officer



#### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

San	ice Agreement on File? XYES	NO PLEASE FRINT II	Profile Number: W	м <b>СN</b> 6882
	azardous Non-Hazardous	TSCA	Renewal Date:	/ /
	Vaste Generator Information			*
1.		EURPURATION	2. SIC Code: 9999	
3.		1 mes 57	4. Phone: (978) 658	-6121
5.	Facility City: LICHINGTO		6. State/Province: M M	
7.	Zip/Postal Code: 01387		8. Generator USEPA/Federal	D#:MX0001403104
9.	County:		10. State/Province ID #:	
11.	Customer Name: OCLN C	ok puration		3)336-4511
	***************************************	MORROW	14. Customer Fax: <u>423-</u>	336.4166
	Billing Address			⊠Same as above
B. V	Vaste Stream Information	ex contracting the second seco		<u></u>
1.	Description			
	a. Name of Waste: <u>いら 71</u> b. Process Generating Waste: D			
	b. Process Generating waste. D	pum Remou	<u> </u>	
	DKUM # 89,84	122, 146		
r		- la Dhusicolat	ate @ 70°F   f. Layers	g. Free liquid range
	c. Color d. Strong odo  (describe):	· · · · · · · · · · · · · · · · · · ·	☐Liquid ☑Single Layer	g. Free liquid range
ļ			Sludge Multi-layer	
-	CHOMIC	☐Other		h. pH: Range
-				to 4.17 %
L				
	i. Liquid Flash Point: □<73°F	□73-99°F □100-139	*****	□Not applicable
•		istituents (including halogenated tive analysis):	organics, debris, and UHC's] present in any con	centration and submit
r	Constituents	Concentration Range	Constituents	Concentration Range
	_	o - 81 PPM		0-507.
H	REACTION SULFION	102°F	SOLIDS	50-1007
<u> </u>	CHX · m c	0-0.104 11		
-	CRESCL	0-18 9%	APALYSIT WS 71652	
, -			T EQUAL OR EXCEED 100%	
	k.   Oxidizer  Py	rophoric 🔲	Explosive	ve
			Shock Sensitive	
	I. Does the waste represented by		f the carcinogens which require OSH	
	m. Does the waste represented by	this profile contain dioxin	is? (list in Section B.1.j)	
			tos?	
			friableno	
	The state of the s	this profile contain benze	ene?	□YES ØNO
	If yes, concentration	ppm		
			SHAP?	
	· · · · · · · · · · · · · · · · · · ·	•		
	Volatile organic concentration		: (VO)?	☐YES □NO
			pleting substances?	
	r. Does the waste contain debris?	(list in Section B.1.j)		BYES □NO
2.	Quantity of Waste	. •		
	Estimated Annual Volume	<u> </u>	Fons □Yards ばDrums □Other (s	specify)
3.	Shipping Information	,		
	a. Packaging:	•		
	☐Bulk Solid; Type/Size:		☐Bulk Liquid; Type/Size.	:
	MDrum; Type; Size: 85 6	ALCON OUTRPR		
	b. Shipping Frequency: Units		r: ☐Month ☐Quarter ☐Year ☑One	time
	c. Is this a U.S. Department of Tra		zardous Material? (If no, skip d, e, a	



### GENERATOR'S WASTE PROFILE SHEET PLEASE PRINT IN INK OR TYPE

d	i. Reportable Quantity (lbs.;kgs.):e. Hazard Class/ID #: <del>\lambda \lambda \</del>	
	USDOT Shipping Name: FLAMMABLE SOLIAS ORCHMIC, W.O.S. 4.1 UNI	<u>325 PC</u> ,
	Personal Protective Equipment Requirements: Transporter/Transfer Station:	
	enerator's Certification (Please check appropriate responses, sign, and date below.)	
	Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2	□YES ØN
1.	a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D, F, K, P, U)	
	b. If a characteristic hazardous waste, do underlying hazardous constituents	
	(UHCs) apply? (if yes, list in Section B.1.j)	<i>J</i>
	Composition - B.1.)	0
2.	Is this a state hazardous waste?	OYES SEN
	Identify ALL state hazardous waste codes	:
3.	Is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up?	KÁYES □NO
not +	If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site clean-up	
	activity. For state mandated clean-up, provide relevant documentation. MKDEP 215 51745 #	53-047
4.	Does the waste represented by this waste profile sheet contain radioactive material, or is disposal	;
	regulated by the Nuclear Regulatory Commission?	□YES KEN
5.	Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated	
	Biphenyls (PCBs) regulated by 40 CFR 761? (if yes, list in Chemical Composition - B.1.j)	□YES EZ.~
	a. If yes, were the PCBs imported into the U.S.?	9
6.	Do the waste profile sheet and all attachments contain true and accurate descriptions of the waste	•
	material, and has all relevant information within the possession of the Generator regarding known or suspected hazards pertaining to the waste been disclosed to the Contractor?	EZYES □NO
7.	Will all changes which occur in the character of the waste be idertified by the Generator and disclosed to the Contractor prior to providing the waste to the Contractor?	P∱¥ES □
	eck here if a Certificate of Destruction or Disposal is required.	
		. 30 40 6 4
Any sa samole	ample submitted is representative as defined in 40 CFR 261 - Appendix t or by using an equivalent method. I authorize a from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned sign	! YVM to obtain a
agent o	of the generator and has confirmed the information contained in this Profile Sheet from information provided by the ger	nerator and additions
informa	ation as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary as for the waste that has been characterized and identified by this approved profile.	permits and
	ication Signature: New Monte Title: PRINCIPAL  (Type or Print): STOLE MORROW Company Name: OLIN CORPORATION	
IVGITIE	(Type or Print): STOLE MORROW Company Name: OLD CORPORATION    Check if additional information is attached. Indicate the number of attached.	
D. W	$2\pi r (50) \pi (6) \pi (6) \pi (6) \pi (6) \pi (7) \pi (6) \pi (7) $	M USE ONLY
1.	Management Method Landfill Non-hazardous Solidification Bioremediation Incine	∍ration
2.	Hazardous Stabilization Other (Specify)  Proposed Ultimate Management Facility:	
3.	Precautions, Special Handling Procedures, or Limitation on Approval:	
<u> </u>	. received person from the first of the firs	
4.	Waste Form 5. Source 6. System Type	
	al Waste Decision	Disapprove
	person's Signature: Date:	
3	on Approval Signature (Optional): Date:  al Waste Approvals Person Signature: Date:	
: ~ p~~ (~)	with the compression of the computation of the comp	

C - 3 COMPOSITE FORM

Composite ID: C WS 71652

CLIENT ID	Grams
OLIENT ID 084	45
089	<b>I I I I I I I I I I</b>
122	125
146	
	501 ams
-	
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#### Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00 Group Number: 2002-251

Matrix: Solid

Units: mg/Kg

	WST ID	Client ID	Detection Limit	Result	Date Analyzed
	WS71650	A - Composite	40.0	134	09/29/00
	WS71651	B - Composite	40.0	105	09/29/00
<b>&gt;</b>	WS71652	C - Composite	40.0	81.0	09/29/00
-		,			

#### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00 Group Number: 2002-251

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
W\$71650	A - Composite	40.0	Not detected	09/29/00
WS71651	B - Composite	40.0	Not detected	09/29/00
WS71652	C - Composite	40.0	Not detected	09/29/00

#### Waste Stream Technology, Inc. pH in Solid SW-846 9045C

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00 Group Number: 2002-251

Matrix: Solid Units: pH Units

WST ID	Client ID	Detection Limit	Result	Date Analyzed
WS71650	A - Composite	NA -	7.74	09/28/00
WS71651	B - Composite	NA	7.07	09/28/00
<b>S</b> WS71652	C - Composite	NA	4.17	09/28/00

#### Waste Stream Technology, Inc. Ignitability (flash point) SW-846 1010

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00 Group Number: 2002-251

Matrix: Solid Units: \* F

WSTID	Client ID	Detection Limit	Result	Date Analyzed
WS71650	A - Composite	NA -	131	09/27/00
WS71651	B - Composite	NA	106	09/27/00
→ WS71652	C - Composite	NA	102	09/27/00

#### Waste Stream Technology, Inc.

PCBs in Soil SW-846 8082

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00 Group Number: 2002-251

Units: mg/Kg Matrix: Solid

WST ID: WS71652

Client ID: C - Composite

Extraction Date: 10/05/00 Date Analyzed: 10/05/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
aroclor 1016	1.50	Not detected		U
aroclor 1221	1.20	Not detected		U
aroclor 1232	1.80	Not detected		U
aroclor 1242	0.900	Not detected		U
aroclor 1248	0.600	Not detected		U
aroclor 1254	0.300	Not detected		U
aroclor 1260	0.300	Not detected		U
Decachlorobiphenyl (%)		115	60- 150	•
Tetrachloro-m-xylene (%)		106	60-150	

#### Waste Stream Technology, Inc. **TCLP Metals Analysis Result Report**

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00 Group Number: 2002-251

Units: mg/L Matrix: TCLP Extract

TCLP Extraction Date: 09/27/00

WST ID: WS71652 Client ID: C - Composite

Digestion Date: 10/02/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	0.045	Not detected	10/02/00	SW-846 6010
Barium by ICP	0.025	0.069	10/02/00	SW-846 6010
Cadmium by ICP	0.025	0.047	10/02/00	SW-846 6010
Chromium by ICP	0.025	0.104	10/02/00	SW-846 6010
Copper by ICP	0.045	0.101	10/02/00	SW-846 6010
Lead by ICP	0.075	Not detected	10/02/00	SW-846 6010
Mercury by Cold Vapor	0.001	Not detected	09/28/00	SW-846 7470
Nickel by ICP	0.025	0.042	10/02/00	SW-846 6010
Selenium by ICP	0.095	Not detected	10/02/00	SW-846 6010
Silver by ICP	0.025	Not detected	10/02/00	SW-846 6010
Zinc by ICP	0.065	.1.26	10/02/00	SW-846 6010

#### Waste Stream Technology, Inc.

#### TCLP Pesticide Analysis 1311/8081

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00

TCLP Extraction Date: 09/27/00

Group Number: 2002-251

Units: µg/L
Matrix: TCLP Extract

WST ID: WS71652

Client ID: C - Composite

Extraction Date: 10/02/00 Date Analyzed: 10/04/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chlordane	0.350	Not detected		U
endrin	0.055	Not detected		U
gamma-BHC (Lindane)	0.016	Not detected		U
heptachlor	0.097	Not detected		U
heptachlor epoxide	0.042	Not detected		U
methoxychlor	0.031	Not detected		U
toxaphene	1.540	Not detected		U
Tetrachloro-m-xylene (%)		50	60-150	#
Decachlorobiphenyl (%)		83	60- 150	

#### Waste Stream Technology, Inc.

## Herbicides in TCLP Extract 1311/8150

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00

TCLP Extraction Date: 09/27/00

Group Number: 2002-251

Units: mg/L

Matrix: TCLP Extract

WST ID: WS71652 Client ID: C - Composite

Extraction Date: 09/28/00 Date Analyzed: 09/29/00

Detection Limit	Result	QC Limits (%)	Qualifier
0.02	Not detected		U
0.02	Not detected		U
	103	10-127	
	0.02	0.02 Not detected 0.02 Not detected	0.02 Not detected 0.02 Not detected

#### aste Stream Technology, Inc. 8270 TCLP Semivolatile Organics 1311/8270

Group Number: 2002-251

Units: µg/L

Group Number: 2002-251 Units: µg/L Matrix: TCLP Extract

WST ID: WS71652

Client ID: C - Composite

Extraction Date: 09/26/00

Date Analyzed: 09/29/00

QC Limits (%)	Qualifier	etection Limit	Result	QC Limits (%)	Qualifier
	U	10	Not detected		U
	Ü	10	Not detected		U
	Ü	30	18 $\epsilon$	KE50L5	J
	Ü	10	Not detected		U
	Ū	10	Not detected		U
	Ü	10	Not detected		U
	Ü	10	Not detected		U
	Ū	. 10	Not detected		U
	Ü	10	Not detected		U
•	Ū	10	Not detected		U ·
	Ü	, <b>50</b>	Not detected		U
21-100	•		47	21-100	
10-94			34	10-94	
35- 114			86	35-114	
43- 116			89	43-116	
10- 123			109	10- 123	
33- 141			89	33-141	

#### Waste Stream Technology, Inc.

#### **TCLP Volatile Organics Analysis** 1311/8260B

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00 Group Number: 2002-251

Units: µg/L Matrix: TCLP Extract

WST ID: WS71652 Client ID: C - Composite TCLP Date: 10/02/00

Date Analyzed: 10/03/00

Compound	Detection Limit	Result -	QC Limits (%)	Qualifier
vinyl chloride	. 100	Not detected	-	· U
1,1-dichloroethene	50	Not detected		U
chloroform	50	Not detected		U
2-butanone	1000	Not detected		U
1,2-dichloroethane	50	Not detected		U
carbon tetrachloride	50	Not detected		U
richloroethene	50	Not detected		υ
penzene	50	Not detected		υ
etrachloroethene	50	Not detected		υ
chiorobenzene	50	Not detected		υ
1,4-dichlorobenzene	50	Not detected		U ·
1,2-Dichioroethane-d4 (%)		98	70-121	
Toluene-d8 (%)		93	81-117	
Bromofluorobenzene (%)		97	74-121	



## GENERATOR'S WASTE PROFILE SHEET PLEASE PRINT IN INK OR TYPE

Service Agreement on File? XYES	NO	Profile Number: WMI	CN0884
	TSCA	Renewal Date:	
A. Waste Generator Information			ě
	- RPORMTEUN	2. SIC Code: ্ৰং ছংগ	
	<u> </u>	4. Phone: (978)658-6	6121
5. Facility City: WILMING T	- N	6. State/Province: 144 14	
7. Zip/Postal Code: 01787		8. Generator USEPA/Federal ID	#: MAD ORI 4 03100
9. County:		10. State/Province ID #:	
***************************************	a pepaph Thurs		1) 336-4511
	MERROW	14. Customer Fax: 423-	336 - 416L
15. Billing Address			⊠Same as above
B. Waste Stream Information		en er tre er til tarrette er er er er er er er er er er er er er	the state of the s
1. Description			
a. Name of Waste: <u>ws 71</u>			
b. Process Generating Waste:	DRUM EXCALAT	7. · W	
DRUM # 12,68,77		3, UC, 124, 137, 138, 1	<u>43, 145, 148,</u>
(67, 78,			
c. Color d. Strong odo			g. Free liquid range
BLNCK (describe):		Liquid Single Layer	to %
CHEMICA		Sludge Multi-layer	i i
	Other		h. pH: Range
			to 7.74%
i Lievid Clock Doint: C1-7395	□73-99°F □100-139°F	C140 100°C C> 200°C	That applicable
i. Liquid Flash Point:			□Not applicable
j. Chemical Composition (List all cor	istituents (including nalogenated org. itive analysis):	anics, debris, and UHC's] present in any concen	tration and submit
र स्रोहरू स <del>्वयाना रख</del>	uro energeoj.		
Constituents	Concentration Range	Constituents	Concentration Range
FLASH PULLET	131°F	DRUM PHETS DEBRUS	0 - 547.
REACTIVE SULFINE	134 PPA	Sacios	54 - 1007
ZING	0-6157 PPM	SEE KTTHERED TELP	
CKESOL	0 - 44.5 896	HNALYRI WS 71650	
	AL COMPOSITION MUST	QUAL OR EXCEED 100%	
		plosive Radioactive	_
		ock Sensitive	ive
I. Does the waste represented by	this profile contain any of th	e carcinogens which require OSHA	
notification? (list in Section B.1.)	)	**************************************	DYES KNO
m. Does the waste represented by	this profile contain dioxins?	(list in Section B.1.J)	DYES BENO
		?	
If yes			
· · · · · · · · · · · · · · · · · · ·	this profile contain benzene	?	TYES PNO
If yes, concentration	ppm ppm		
		IAP?	
		**********************************	
If no, does the waste meet the o	rganic LDR Exemption?	<b>6.</b> 	REYES NO
		O)?	
Volatile organic concentration	ррп	iw	
		ing substances?	
r. Does the waste contain debris?	(list in Section B.1.J)		ZYES NO
2. Quantity of Waste			
Estimated Annual Volume	1 0 □Ton	sYards <b>[≾</b> DrumsOther (spe	cifv)
· · · · · · · · · · · · · · · · · · ·		- C (Shering Donie) (sher	
3. Shipping information	•		
a. Packaging:			
□Bulk Solid; Type/Size: <u>4</u>		☐Bulk Liquid; Type/Size:	
DDrum; Type; Size: 14 - 85	- CHULL OVERP	%-c □Other:	
b. Shipping Frequency: Units		Month ☐Quarter ☐Year ⊠One time	e []Other
		dous Material? (If no, skip d, e, and i	



#### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

d	Reportable Quantity (lbs.;kgs.): e. Hazard Class/ID #:	
f.		PCD
g	. Personal Protective Equipment Requirements:	
ħ	. Transporter/Transfer Station:	
e ce	nerator's Certification (Please check appropriate responses, sign, and date below.)	
		<u>, e este santa santa manero e escrete e e e e e e e e e e e e e e e e e e</u>
1.	Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2	□YES (ZÓNO
	a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D, F, K, P, U)	
	b. If a characteristic hazardous waste, do underlying hazardous constituents	•
	(UHCs) apply? (if yes, list in Section B.1.j)	
	c. Does this waste contain debris? (if yes, list size and type in Chemical	
	Composition - B.1.)	
2.	Is this a state hazardous waste?	
<i>d</i>	identify ALL state hazardous waste codes	TAES SNO
	reality to the affice flower was a second for	
3.	is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up?	ZYES DNO
	If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site clean-up	- -
	activity. For state mandated clean-up, provide relevant documentation. MKDEP 216 5175 03-04	7(
4.	Does the waste represented by this waste profile sheet contain radioactive material, or is disposal	
	regulated by the Nuclear Regulatory Commission?	DYES MO
	Plane the supple represented by this supple soull should sentely account the set of Palestand A	
5.	Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated  Biphenyls (PCBs) regulated by 40 CFR 7617 (if yes, list in Chemical Composition - B.1.j)	□YES PHO
	a. If yes, were the PCBs imported into the U.S.?	□.ro □.40
	· · · · · · · · · · · · · · · · · · ·	
6.	Do the waste profile sheet and all attachments contain true and accurate descriptions of the waste	
	material, and has all relevant information within the possession of the Generator regarding known or suspected hazards pertaining to the waste been disclosed to the Contractor?	EXVEG TIME
	contract to be something to the second section of the second to the second to the second termination of the second termina	BAES DNO
7.	Will all changes which occur in the character of the waste be identified by the Generator and disclosed	
200000000000000000000000000000000000000	to the Controctor prior to providing the waste to the Contractor?	RYES UNO
[T]Che	ck here if a Certificate of Destruction or Disposal is required.	
Any sar	mple submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. I authorize WN from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs as	I to obtain a
agent o	f the generator and has confirmed the information contained in this Profile Sheet from information provided by the general	r authorized or and additional
Informa	tion as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary pen	nits and
licenses	s for the waste that has been characterized and identified by this approved profile.	
Certific	eation Signature: Title: PRINCIPME ENU.	SYGCIACI
		ate: 11/15/
	Check if additional information is attached. Indicate the number of attached pa	
	to the second of	D <u>                                    </u>
D. WI	Management's Decision FOR WM U	SEONLY
1.	Management Method	
,	☐Hazardous Stabilization ☐Other (Specify)	
2.	Proposed Ultimate Management Facility:	
3.	Precautions, Special Handling Procedures, or Limitation on Approval:	
¥		
4.	Waste Form 5. Source 6. System Type	
		Disapproved
•	erson's Signature: Date:	
	n Approval Signature (Optional):	
Specia	l Waste Approvais Person Signature: Date:	_

A-3

#### **COMPOSITE FORM**

10571650 Composite ID: CLIENT ID Grams 012 068 077 082 105 109 113 116 124 13.7 15-8 148 145 148 167 <u> 30</u> 078 28 162 <u> 85</u>. 509 pms. RESH CKE ma-1

## Waste Stream Technology, Inc. Ignitability (flash point) SW-846 1010

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00

Group Number: 2002-251

Matrix: Solid Units: ° F

WSTID	Client ID	Detection Limit	Result	Date Analyzed
<b>SWS71650</b>	A - Composite	NA "	131	09/27/00
WS71651	B - Composite	NA	106	09/27/00
WS71652	C - Composite	NA	102	09/27/00

#### Waste Stream Technology, Inc. pH in Solid SW-846 9045C

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00 Group Number: 2002-251

Matrix: Solid Units: pH Units

WST ID	Client ID	Detection Limit	Result	Date Analyzed
<b>S</b> WS71650	A - Composite	NA -	7.74	09/28/00
WS71651	B - Composite	NA	7.07	09/28/00
WS71652	C - Composite	. NA	4.17	09/28/00

#### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00 Group Number: 2002-251

Matrix: Solid Units: mg/Kg

WSTID	Client ID	Detection Limit	Result	Date Analyzed
->WS71650	A - Composite	` 40.0 -	Not detected	09/29/00
WS71651	B - Composite	40.0	Not detected	09/29/00
WS71652	C - Composite	40.0	Not detected	09/29/00

### Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00 Group Number: 2002-251

Matrix: Solid Units: mg/Kg

WST ID	Client ID	Detection Limit	Result	Date Analyzed
<del>&gt;</del> WS71650	A - Composite	40.0	134	09/29/00
WS71651	B - Composite	40.0	105	09/29/00
WS71652	C - Composite	40.0	81.0	09/29/00

# Waste Stream Technology, Inc.

PCBs in Soil SW-846 8082

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00 Group Number: 2002-251

Units: mg/Kg Matrix: Solid

WST ID: WS71650 Client ID: A - Composite

Extraction Date: 09/28/00 Date Analyzed: 09/29/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
aroclor 1016	0.05	Not detected		U
arocior 1221	0.04	Not detected		U ×
aroclor 1232	0.06	Not detected		U
aroclor 1242	0.03	Not detected		Ú
aroclor 1248	0.02	Not detected		U
arocior 1254	0.01	Not detected		U
aroclor 1260	0.01	Not detected		Ū
Decachlorobiphenyl (%)	•	69	60-150	
Tetrachloro-m-xylene (%)		87	60-150	

# Waste Stream Technology, Inc. 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 09/22/00

Date Received: 09/25/00

TCLP Extraction Date: 09/27/00

Group Number: 2002-251

Units: µg/L

Matrix: TCLP Extrac

WST ID: WS71650 Client ID: A - Composite

Extraction Date: 09/26/00 Date Analyzed: 09/29/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
pyridine	10	Not detected		U
1,4-dichlorobenzene	10	Not detected	•	Ü
Total cresols(o,m & p)	30	44.5	TCLP 260	•
nitrobenzene	10	Not detected		U
hexachloroethane	10	Not detected		U
hexachlorobutadiene	10	Not detected		U
2,4,6-trichlorophenol	10	Not detected		Ų
2,4,5-trichlorophenol	10	Not detected	•	U
2,4-dinitrotoluene	10	Not detected		U
hexachlorobenzene	10	Not detected		U.
реntachloropheлоl	50	Not detected	·	U
2-Fluorophenol (%)		48	21-100	
Phenol-d6 (%)		29	10-94	
Nitrobenzene-d5 (%)		94	35-114	·
2-Fluorobipherryl (%)		95	. 43-116	
2,4,6-Tribromophenol (%)		120 ·	10-123	
Terphenyl-d14 (%)		91	33-141	

Dilution Factor

4

### Waste Stream Technology, Inc. **TCLP Volatile Organics Analysis** 1311/8260B

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00 Group Number: 2002-251

Units: µg/L Matrix: TCLP Extract

WST ID: WS71650 Client ID: A - Composite TCLP Date: 09/29/00

Date Analyzed: 10/02/00

Compound	Detection Limit	Result -	QC Limits (%)	Qualifier
vinyl chloride	100	Not detected	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	U
1,1-dichloroethene	50	Not detected		U
chloroform	50	Not detected	•	U
2-butanone	1000	Not detected		U
1,2-dichloroethane	50	Not detected		U
carbon tetrachloride	50	Not detected		U ,
trichloroethene	50	Not detected		U
benzene	50	Not detected		U
etrachloroethene	50	Not detected		U
chlorobenzene	50	Not detected		U
1,4-dichlorobenzene	- 50	Not detected		U ·
I,2-Dichloroethane-d4 (%)		91	70-121	
Foluene-d8 (%)		93	81-117	
3romofluorobenzene (%)		95	74-121	

# Waste Stream Technology, Inc. TCLP Metals Analysis Result Report

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00 Group Number: 2002-251

Units: mg/L

Matrix: TCLP Extrac

TCLP Extraction Date: 09/27/00

WST ID: WS71650 Client ID: A - Composite

Digestion Date: 10/02/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	0.045	Not detected	10/02/00	SW-846 6010
Barium by ICP	0.025	0.050	10/02/00	SW-846 6010
Cadmium by ICP	0.025	Not detected	10/02/00	SW-846 6010
Chromium by ICP	0.025	Not detected	10/02/00	SW-846 6010
Copper by ICP	0.045	Not detected	10/02/00	SW-846 6010
Lead by ICP	0.075	Not detected	10/02/00	SW-846 6010
Mercury by Cold Vapor	0.001	Not detected	09/28/00	SW-846 7470
Nickel by ICP	0.025	Not detected	10/02/00	SW-846 6010
Selenium by ICP	0.095	Not detected	10/02/00	SW-846 6010
Silver by ICP	0.025	Not detected	10/02/00	SW-846 6010
Zinc by ICP	0.065	-6.57	10/02/00	SW-846 6010

## Waste Stream Technology, Inc.

### TCLP Pesticide Analysis 1311/8081

Site: Olin - Drum Phase Date Sampled: 09/22/00

Date Received: 09/25/00

TCLP Extraction Date: 09/27/00

Group Number: 2002-251

Units: µg/L

Matrix: TCLP Extract

WST ID: WS71650

Client ID: A - Composite

Extraction Date: 10/02/00 Date Analyzed: 10/04/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chlordane	0.350	Not detected		U
endrin.	0.055	Not detected		U
gamma-BHC (Lindane)	0.016	Not detected		U
heptachlor	0.097	Not detected		U
heptachlor epoxide	0.042	Not detected		U
methoxychlor	0.031	Not detected		U
toxaphene	1.540	Not detected		U
Tetrachioro-m-xylene (%)		59	60-150	#
Decachlorobiphenyl (%)	•	94	60-150	

**Dilution Factor** 

1

# Waste Stream Technology, Inc. Herbicides in TCLP Extract

1311/8150

Site: Olin - Drum Phase Date Sampled: 09/22/00 Date Received: 09/25/00

TCLP Extraction Date: 09/27/00

Group Number: 2002-251

Units: mg/L

Matrix: TCLP Extra\_1

WST ID: WS71650

Client ID: A - Composite

Extraction Date: 09/28/00 Date Analyzed: 09/29/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
2,4-D	0.02	Not detected		U
2,4,5-TP (Silvex)	0.02	Not detected	•	U
2,4-DCPAA (%)		91	10-127	

**Dilution Factor** 

4



### GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

	vice Agreement on File? ☑YES ☐ fazardous ☑Non-Hazardous ☐ Waste Generator Information	NO JTSCA	Profile Number: V Renewal Date:	VMI CN6886
1. 3. 5. 7. 9. 11. 13.	Generator Name: OLIN Gracility Street Address: 51 Gy Facility City: WILMING: Zip/Postal Code: OI897 County: Customer Name: OLIN E Customer Contact: 57EUE Billing Address Waste Stream Information Description a. Name of Waste: US 7	CORPORATION  CORPORATION  MORROW  1715 COMPOS  ORUM REMOUSE	10. State/Province ID #: 12. Customer Phone: (4) 14. Customer Fax: 4;	- 6121  ID #: M → 0 △ 0 1 4 0 3 1 9 9  23 336 - 4511  23 376 - 4(66  [Same as above
	c. Color d. Strong odd (describe):	e. Physical state	e @ 70°F   f. Layers ]Liquid	g. Free liquid range to % h. pH: Range
Į.	Liquid Flash Point: □<73°F     Chemical Composition (List all correspondence)  Constituents	☐73-99°F ☐100-139°F instituents [including halogenated orgitive analysis):  Concentration Range	☐ 140-199°F ☐≥ 200°F panics, debris, and UHC's] present in any co	to 4.46 %  Not applicable Incentration and submit  Concentration Range
	REMOTING SULFIAGE	118 PPM	DRUM PARTS/DEBRUS	0 - 5 a 74
-	FLASH POINT	127-5	304108	50 - 1007.
ŀ	<u> Lees 4</u>	0-63 PP4	KHALLESS WS 71715	
·	k. Oxidizer Py Carcinogen Int I. Does the waste represented by	rophoric Ex rectious Sh this profile contain any of the	EQUAL OR EXCEED 100%  plosive	active IA
	m. Does the waste represented by n. Does the waste represented by If yes	this profile contain dioxins? this profile contain asbesto	s?friable	
	o. Does the waste represented by If yes, concentration	ppm		<del></del>
	<ul><li>p. Is the waste subject to RCRA St</li><li>If no, does the waste meet the c</li></ul>	ubpart CC controls? rganic LDR Exemption? 00 ppmw volatile organic (\	······································	 ☐YES ☐NO
			ting substances?	
2.	Quantity of Waste Estimated Annual Volume	<b>∠</b> □Tor	ıs ∐Yards ∰Drums ∐Other (s	specify)
3.	Shipping information  a. Packaging:  Bulk Solid; Type/Size: 3-1  Drum; Type; Size: 3-85	CALLON OUTA	□Bulk Liquid; Type/Size:	
	b. Shipping Frequency: Units	<b>6</b> Per.□	]Month	time Other
	c. Is this a U.S. Department of Train	nsportation (USDOT) Hazai	dous Material? (If no, skip d, e, a	nd f) KIYES □NO



# GENERATOR'S WASTE PROFILE SHEET PLEASE PRINT IN INK OR TYPE

d	i. Reportable Quantity (lbs.;kgs.):	
f.		SPGT
g	. Personal Protective Equipment Requirements:	
ħ	. Transporter/Transfer Station:	
C. Ge	nerator's Certification (Please check appropriate responses, sign, and date below.)	
1.	Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2	TAES BUO
	b. If a characteristic hazardous waste, do underlying hazardous constituents	
	(UHCs) apply? (if yes, list in Section B.1.j)	
	c. Does this waste contain debris? (if yes, list size and type in Chemical  Composition - B.1.)	•
2.	Is this a state hazardous waste?	□YES KHO
	1001dfy 71000 4010 11000 4000 4000 4000 4000 40	
2	is the waste from s CERCLA (40 CFR 300, Appendix B) or state mandated clean-up?	
3.	If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site clean-up	SEYES □NO
	activity. For state mandsted clean-up, provide relevant documentation. WHO EP 216 5176 # 03-	0471
4.	Does the waste represented by this waste profile sheet contain radioactive material, or is disposal	
7.	regulated by the Nuclear Regulatory Commission?	TYES KINO
<b>5</b>	Does the wester represented by this waste profile short centers appearable on all Debughlarings of	
<b>J</b> .	Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated  Biphenyls (PCBs) regulated by 40 CFR 761? (if yes, list in Chemical Composition - B.1.j)	TYES MO
	a. If yes, were the PCBs imported into the U.S.?	<u> </u>
6.	Do the waste profile sheet and all attachments contain true and accurate descriptions of the waste	
<b>6.</b>	material, and has all relevant information within the possession of the Generator regarding known or	
	suspected hazards pertaining to the waste been disclosed to the Contractor?	EXYES   NO
7.	Will all changes which occur in the character of the waste be identified by the Generator and disclosed	•
1.	to the Contractor prior to providing the waste to the Contractor?	SYES NO
□Che	ck here if a Certificate of Destruction or Disposal is required.	
	·	
Any sa	mple submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. I authorize WI from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs a	Vi to obtain s
agent c	of the generator and has confirmed the information contained in this Profile Sheet from information provided by the genera	tor and additional
informa	ition as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary per a for the waste that has been characterized and identified by this approved profile.	mits and
	cation Signature: Title: PRINCIPAC ENU	. SPECLALL
Name	(Type or Print): STELE ME ARE Company Name: OLIN CORPERATOND	ete: 11/15/2
	Check if additional information is attached. Indicate the number of attached page 1	ages ((
D. WI	4 Management's Decision FOR WM t	ISE ONI V
1.	Management Method  Landfill  Non-hazardous Solidification  Bioremediation  Incinerat	
	☐Hazardous Stabilization ☐Other (Specify)	
2.	Proposed Ultimate Management Facility:	
3.	Precautions, Special Handling Procedures, or Limitation on Approval:	
4.	Waste Form 5. Source 6. System Type	
•		]Disapproved
	person's Signature: Date: Date: Date:	
	al Waste Approvals Person Signature: Date:	

# COMPOSITE FORM

Composite ID: A W5 717/5

CLIENT ID	Grams	
086	84 -	
086	6h ·	
076	84	
101	84	
136	84	***************************************
166	84	1
	504	
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### Waste Stream Technology, Inc. Section 7.3.4.2 Reactive Sulfide SW-846 9034

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00 Group Number: 2002-253

Matrix: Solid Units: mg/Kg

Client ID	Detection Limit	Result	Date Analyzed
A - Composite	40.0	118	09/29/00
B - Composite	40.0	81.8	09/29/00
D - Composite	40.0	118	09/29/00
E - Composite	40.0	40.9	09/29/00
	A - Composite B - Composite D - Composite	A - Composite 40.0 B - Composite 40.0 D - Composite 40.0	A - Composite       40.0       118         B - Composite       40.0       81.8         D - Composite       40.0       118

### Waste Stream Technology, Inc. Section 7.3.3.2 Reactive Cyanide SW-846 9014

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00 Group Number: 2002-253

Matrix: Solid Units: mg/Kg

WSTID	Client ID	Detection Limit	Result	Date Analyzed
→ WS71715	A - Composite	40.0	Not detected	09/29/00
WS71716	B - Composite	40.0	Not detected	09/29/00
WS71718	D - Composite	40.0	Not detected	09/29/00
WS71719	E - Composite	40.0	Not detected	09/29/00

### Waste Stream Technology, Inc. pH in Solid SW-846 9045C

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00 Group Number: 2002-253

Matrix: Solid Units: pH Units

WST ID	Client ID	Detection Limit_	Result	Date Analyzed
<del>7</del> WS71715	A - Composite	NA	4.46	09/28/00
<b>w</b> S71716	B - Composite	NA	7.32	09/28/00
WS71718	D - Composite	. NA	7.73	09/28/00
WS71719	E - Composite	. NA	6.36	09/28/00

### Waste Stream Technology, Inc. Ignitability (flash point) SW-846 1010

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00 Group Number: 2002-253

Matrix: Solid Units: ° F

WST ID	Client ID	Detection Limit_	Result	Date Analyzed
<del>-&gt;</del> WS71715	A - Composite	NA	127	09/27/00
WS71716	B - Composite	NA	>200	09/27/00
WS71718	D - Composite	NA	>200	09/27/00
WS71719	E - Composite	. <b>N</b> A	>200	09/27/00

# Waste Stream Technology, Inc. PCBs in Soil SW-846 8082

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00 Group Number: 2002-253

Units: mg/Kg Matrix: Solid

WST ID: WS71715 Client ID: A - Composite

Extraction Date: 09/28/00 Date Analyzed: 09/29/00

Compound	Detection Limit	Result -	QC Limits (%)	Qualifier
aroclor 1016	0.05	Not detected		U
aroclor 1221	0.04	Not detected	ı	U
aroclor 1232	0.06	Not detected	,	U
aroclor 1242	0.03	Not detected		U
aroclor 1248	0.02	Not detected		U
arocior 1254	0.01	Not detected		U
aroclor 1260	0.01	Not detected		U
Decachlorobiphenyl (%)		94	60-150	
Tetrachloro-m-xylene (%)		71	60-150	

# Waste Stream Technology, Inc. TCLP Metals Analysis Result Report

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00

Group Number: 2002-253

Units: mg/L

Matrix: TCLP Extract

TCLP Extraction Date: 09/27/00

WST ID: WS71715 Client ID: A - Composite

Digestion Date: 10/02/00

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	0.045	Not detected	-10/02/00	SW-846 6010
Barium by ICP	0.025	Not detected	10/02/00	SW-846 6010
Cadmium by ICP	0.025	Not detected	10/02/00	SW-846 6010
Chromium by ICP	0.025	Not detected	10/02/00	SW-846 6010
Copper by ICP	0.045	0.277	10/02/00	SW-846 6010
Lead by ICP	0.075	Not detected	10/02/00	SW-846 6010
Mercury by Cold Vapor	0.001	Not detected	10/03/00	SW-846 7470
Nickel by ICP	0.025	Not detected	10/02/00	SW-846 6010
Selenium by ICP	0.095	Not detected	10/02/00	SW-846 6010
Silver by ICP	0.025	Not detected	10/02/00	SW-846 6010
Zinc by ICP	0.065	0.168	10/02/00	SW-846 6010

### Waste Stream Technology, Inc. Herbicides in TCLP Extract 1311/8150

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00

TCLP Extraction Date: 09/27/00

Group Number: 2002-253

Units: mg/L

Matrix: TCLP Extra

WST ID: WS71715 Client ID: A - Composite Extraction Date: 09/28/00

Date Analyzed: 09/29/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
2,4-D	0.02	Not detected		U
2,4,5-TP (Silvex)	0.02	Not detected		U
2,4-DCPAA (%)		123	10- 127	

# Waste Stream Technology, Inc.

### TCLP Pesticide Analysis 1311/8081

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00

Group Number: 2002-253

Units: µg/L Matrix: TCLP Extract

TCLP Extraction Date: 09/27/00

WST ID: WS71715 Client ID: A - Composite

Extraction Date: 10/02/00 Date Analyzed: 10/04/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chlordane	0.350	Not detected		U
endrin .	0.055	Not detected	•	Ú
gamma-BHC (Lindane)	0.016	Not detected		U
heptachlor	0.097	Not detected		U
heptachlor epoxide	0.042	Not detected		U
methoxychlor	0.031	Not detected		U
toxaphene	1.540	Not detected	•	U
Tetrachioro-m-xylene (%)		57	60-150	#
Decachlorobiphenyl (%)		69	60-150	

### Waste Stream Technology, Inc. 8270 TCLP Semivolatile Organics 1311/8270

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00

TCLP Extraction Date: 09/27/00

Group Number: 2002-253

Units: µg/L Matrix: TCLP Extrac

WST ID: WS71715 Client ID: A - Composite

Extraction Date: 09/26/00 Date Analyzed: 09/29/00

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
pyridine	10	Not detected		U
1,4-dichlorobenzene	10	Not detected		U
Total cresols(o, m & p)	30	62.5		
nitrobenzene	10	Not detected		U
hexachloroethane	10	Not detected		U
hexachlorobutadiene	10	Not detected		U
2,4,6-trichlorophenol	10	Not detected		U
2,4,5-trichlorophenol	10	Not detected	•	U
2,4-dinitrotoluene	10	Not detected		U
hexachlorobenzene	10	Not detected		U·
pentachlorophenol	50	Not detected	,	U
2-Fluorophenol (%)		47	21-100	
Phenol-d6 (%)		37	10-94	
Nitrobenzene-d5 (%)		97	35-114	
2-Fluorobiphenyl (%)		91	43-116	
2,4,6-Tribromophenol (%)		117	10-123	
Terphenyl-d14 (%)		91	33-141	

### Waste Stream Technology, Inc. TCLP Volatile Organics Analysis 1311/8260B

Site: Olin - Drum Phase Date Sampled: 09/25/00 Date Received: 09/26/00 Group Number: 2002-253

Units: µg/L Matrix: TCLP Extract

WST ID: WS71715 Client ID: A - Composite TCLP Date: 09/29/00

Date Analyzed: 10/02/00

Compound	Detection Limit	Result -	QC Limits (%)	Qualifier
vinyl chloride	100	Not detected		U
1,1-dichloroetherie	50	Not detected		U
chloroform	50	Not detected	,	U
2-butanone	1000	Not detected		U
1,2-dichloroethane	50	Not detected		U
carbon tetrachloride	50	Not detected		U
trichloroethene	50	Not detected		U
benzene	50	Not detected		U
tetrachloroethene	50	Not detected		U
chlorobenzene	50	Not detected		U
1,4-dichlorobenzene	50	Not detected		U -
1,2-Dichloroethane-d4 (%)		95	70-121	
Toluene-d8 (%)		90	81-117	
Bromofluorobenzene (%)		97	74-121	

Drum Removal RAM, Status Report No. 2 and Completion Statement Olin Corporation July 12, 2001

# Appendix E

Off-site Disposal Shipping Documents

Drum Removal RAM, Status Report No. 2 and Completion Statement Olin Corporation July 12, 2001

SHIPPING DOCUMENTS – ROLL-OFFS (SOIL)

4	NON-HAZARDOUS 1. Generator's US EPAID No.   Manifest Doc. No.   2. Page 1.
É	WASTE MANIFEST MAD 0.09 P 40 3 1 0 4 1 0 2 7 4 P 1 1 2 2 3 1 0 4 1 0 2 7 4 P 2 3 1 0 4 1 0 2 7 4 P 3 1 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3
1	51 EAMES STREET
	4. Generator's Phone ( = _ ) SAME
1	5. Transporter 1 Company Name 6. US EPA ID Number A Transportar's Phone
	WASTE MANAGEMENT N. F. F. T. INC. C. T. D. 9.8.3.8.9.6.3.4.1 860-342-0667
	7. Transporter 2 Company Name 8. US EPA ID Number B. Transporter's Phone
	9. Designated Facility Name and Site Address 10. US EPA ID Number C. Facility's Phone
	CWM CHEMICAL SERVICES, LLC
	1550 BALMER ROAD MODEL CITY NV 14107 N. V. D. O. 4. 9. 8. 3. 6. 6. 7. 9 716-754-8231
	11: Waste Shipping Name and Description 12. Containers 13. 14. Unit
	a NON HAZARDOUS WASTE SOLID, NON DOT, NON RCRA REGULATED
	001 3200
G	b.
EZ	
R	
Ť	
R	d.
	D. Additional Descriptions for Materials Listed Above E. Handling Codes for Wastes Listed Above
	D. Additional Descriptions for Materials Listed Above  E. Handling Codes for Wastes Listed Above
	15. Special Handling Instructions and Additional Information
	EMERGENCY PHONE # 860-342-0667 FB # /04/536
	APPROVAL # CN6859 8/535534
	WT EST- SEX 572744
	16. GENERATOR'S CERTIFICATION: I certify the metanials described above on this manifest are not subject to federal regulations (pyreporting proper disposal of Hazardous Weste.  Printed/Typed Name
₩	DON CHARLON Somble in Comme 10 30 2
TRAZ	17. Transporter 1 Acknowledgement of Receipt of Materials  Printed/Typed Name / Signature Signature Month Day Year
	Teun keurs
DEORI-UR	18. Transporter 2 Acknowledgament of Receipt of Materials
ER	Printed/Typed Name Signature Month Day Year
	19. Discrepancy Indication Space
F	
A C	actual seed 38300K
L I T Y	20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Ý	Printed/Typed Name Signature A Month Day Year
	ELEU CARTO Eller Carta V031/00
	GENERATOR
	TRANSPORTER-#1

The second secon

$\wedge$			SITE DEPARTURE TIM	E: 12 Com	PICKUP#:	394
TE MA	OGANO NAGEMENT COMPANY	. ~	DRIVER DAY	Leuce	RETURN # :	
. 800	-272-3867	4.	MANIFEST #: LOZ	74		
£L:	10/30/2000	TIME:	7 .30 AM		FB #: 11	1111 104536
SERV:	T/O 1-30Y OT	W/1-6	MIL		<b>3</b>	
PU LOC:	51 EAMES ST 51 EAMES ST WILMINGTON,		1887	BILL TO: PH:	SEVENSON ENV 2749 LOCKPOR NIAGRA FALLS 716-284-0431	T ROAD , NY 14305
PAPERWORK: CONTAINER:	BRING 1-30B/T		MATERIAL: PRO RATE:	HZ TRANS	PO #:	
COMMENTS:			·	REQUESTED E DATE / TIME:	BY: JEFF 10/24/	20 <b>00</b> 17:28 PM
		ENDING FOODES	-CREDIT APPR	UVAL		·
		<i>,</i>				
	LIGHT TAKE PARK UNTIL LEFT ONTO	A RIT DEAD EAMES	E ONTO PRES. END. TURN RI ST. (OXBOW S	WAY. GO ANTE ON WOBUNT. IS TO THE	PPROX. 1 MI T RN ST, GO APP HE RIGHT) GO	RAMP AT THE FI HRU AN INDUSTRI ROX. 1/2 MI TL 1/2 MI ON LEFT AND SEVENSON S
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	5 3000000	<u> </u>		· V		
ne undersigned h	ereby releases the deli-	vering comp	any and driver from all	damages and claims	s caused by the weight a	y shall be made on the premis nd/or height and/or width of shrubs, buildings, structures, o

Signature

**CUSTOMER** Date



#### WASTE MANAGEMENT, INC.

CWM Chemical Services, L.L.C. 1550 Balmer Rd. P.O. Box 200 Model City, N.Y. 14107 716/754-8231

rederal EPA ID: NYD049836679

OLIN CORPORATION
ATTN: ENVIRONMENTAL COMPLIANCE
MADO01403104
51 EAMES ST
WILMINGTON MA 01887-3393

#### CERTIFICATE OF DISPOSAL FOR NON-HAZARDOUS WASTE

CWM CHEMICAL SERVICES, L.L.C. has received waste material from OLIN CORPORATION on 10/31/00 as described on Shipping Document number X000010274 Sequence number 01.

Profile Number: CN6859
CWM Tracking ID: 8153553401
CWM Unit #: 1\*0
Disposal Date: 11/02/00

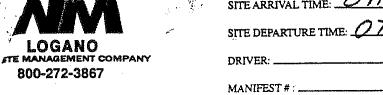
I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Jonna ames- Cussick

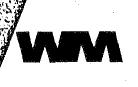
DONNA AMES-CASSICK COMPLIANCE MANAGER Certificate # 191902 11/03/00

For questions please call our Customer Service Dept. at (800) 843-3604

I									
Man.		NON-HAZARDOUS	1. Generator's US EPA ID No.	Manifest Doc. No	1			A CONTRACTOR OF THE PARTY OF TH	Annie Annie
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A	3.	Generator's Name and Mailing Address	OLIN CORPORATION				<del></del>		***************************************
1			51 EAMES STREET	,					
-			WILMINGTON, MA 01887			S.	AME		
	***************************************	. Generator's Phone( 978 )658-612	1 ATTN: STEVE MORROW						
	***************************************	Transporter 1 Company Name	6. US EPA ID N		A.	Transporter	's Phone		
	WZ		TNC. C.T.D.9.8.3.8.			····	342-06	567	
1	7.	Transporter 2 Company Name	8. US EPAID N			. Transporter			
			······································		1_	· _			
	9.	Designated Facility Name and Site Address	10. US EPA ID N	lumber	C.	. Facility's Ph	none		**************************************
	lav	WM CHEMICAL SERVICES, LLC							
1	15	550 BALMER ROAD	1	_			- ·		
1	MO	ODEL CITY, NY 14107	N-Ý-D-0-4-9-8-	<u>-3 ·6 ·6 ·7 -9</u>			754-82		
1	11.	Waste Shipping Name and Description					Containers	Total	14. Unit
1	<u></u>					No.	D. Type	e Quantity	Wt/Vol
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à F		Printed/Typed Name	Signat			***************************************		****** Day	
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0	18.	Transporter 2 Acknowledgement of Receipt of Ma						<u> </u>	
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800-272-	-3867	MANIFEST#:	
10/2 L:	7/2000 TIM	1E: 0:0 AM	FB#: 111111 104408
ERV: T/O	1-30Y OT W/	1-6 MIL	
51 WIL	EAMES ST. EAMES ST. MINGTON, MA	01887	BILL TO: SEVENSON ENVIRONMENTAL 2749 LOCKPORT ROAD NIAGRA FALLS, NY 14305 PH: 716-284-0431
PH:			•
PAPERWORK: CONTAINER:	BRING 1-30B/T	MATERIAL: PRO RATE:	HZ TRANS PO#:
COMMENTS:	ν.		REQUESTED BY: JEFF 10/24/2000 17:28 P: DATE/TIME:
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LI PA LE OL	GHT TAKE A ARK UNTIL DEA EFT ONTO EAM IN CORP. (II CWM MODEL C	RITE ONTO PRES. AD END. TURN RI ES ST. (OXBOW S MMED. AFTER BRI ITY DISPOSAL FA	WAY. GO APPROX. 1 MI THRU AN INDUSTR TE ON WOBURN ST, GO APPROX. 1/2 MI TO T. IS TO THE RIGHT) GO 1/2 MI ON LEFT DGE) LDKK FOR OLIN SIGN AND SEVENSON CILITY / 1550 BALMER ROAD
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#### WASTE MANAGEMENT, INC.

CWM Chemical Services, L.L.C. 1550 Balmer Rd. P.O. Box 200 Model City, N.Y. 14107 716/754-8231

rederal EPA ID: NYD049836679

OLIN CORPORATION

ATTN: ENVIRONMENTAL COMPLIANCE

MADO01403104 51 EAMES ST

WILMINGTON MA 01887-3393

### CERTIFICATE OF DISPOSAL FOR NON-HAZARDOUS WASTE

CWM CHEMICAL SERVICES, L.L.C. has received waste material from OLIN CORPORATION on 10/30/00 as described on Shipping Document number 0000X10273 Sequence number 01.

Profile Number: CN6859 CWN Tracking ID: 8153547201

CWM Unit #: 1\*0

Disposal Date: 11/02/00

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Jonna ames- Cussick

DONNA AMES-CASSICK COMPLIANCE MANAGER Certificate # 191895 11/03/00

For questions please call our Customer Service Dept. at (800) 843-3604

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16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.  Printed/Typed Name  17. Transporter 1 Acknowledgement of Receipt of Materials  Printed/Typed Name  18. Transporter 2 Acknowledgement of Receipt of Materials  Printed/Typed Name  Signature  Month  Day  Y  19. Discrepancy Indication Space  Face  20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.			and the state of	2. A. Il Vn		Q15.35	-//	·~ /				
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	SITE DEPARTURE TIME	0745	PICKUP#:	2
LOGANO , re management company	DRIVER:	Vera (		
800-272-3867	MANIFEST #:	0272		
10/27/2000 TIME: 0 2L: 0 3ERV: T/O 1-30Y OT W/1-6 MIL	IØ AM	F	3#: 111111 10	3448Ø
PULOC: 51 EAMES ST. 51 EAMES ST. WILMINGTON, MA 01887		2749 L	SON ENVIRONMEN LOCKPORT ROAD R FALLS, NY 14 34-0431	
PAPERWORK: BRING CONTAINER: 1-30B/T	MATERIAL: H2 PRO RATE:	TRANS	PO #:	
COMMENTS:		REQUESTED BY: DATE / TIME:	JEFF 10/24/2000	17:28 PM
C.O.D. PENDING CRE PO # E6729009	DIT APPROVAL			
Apricual # (	'N 6859			
OLIN CORP. (IMMED. A	TO PRES. WAY TURN RITE O (OXBOW ST. I FTER BRIDGE)	. GO APPROX. N WOBURN ST, S TO THE RIGH LOKK FOR OLI	1 MI THRU AN GO APPROX. 1/ HT) GO 1/2 MI N SIGN AND SE	INDUSTRIAL 2 MI TURN ON LEFT IS VENSON SIGN.
CONSIGNEE: CWM MODEL CITY DISC MODEL CITY, NY 1436 DELIVERY LOCATION DIRECTIONS:	27-0200		Ph : 800-754-	@45 <b>5</b>
RTE 104 TO RTE 18N TO GUARDHOUSE AT TI			GHT ONTO BALM	IER RD. FOLLO
COMMENTS:				
				·

The undersigned acknowledges that he/she has instructed the driver of the delivering vehicle as to the place where said delivery shall be made on the premises. The undersigned hereby releases the delivering company and driver from all damages and claims caused by the weight and/or height and/or width of the delivering vehicle or container. Such damage shall include but not be limited to damage to sidewalks, lawns, driveways, trees, shrubs, buildings, structures, etc.

CUSTOMER



WASTE MANAGEMENT, INC.

CWM Chemical Services, L.L.C. 1550 Balmer Rd. P.O. Box 200 Model City, N.Y. 14107 716/754-8231

Federal EPA ID: NYD049836679

OLIN CORPORATION
ATTN: ENVIRONMENTAL COMPLIANCE
MADO01403104
51 EAMES ST
WILMINGTON MA 01887-3393

### CERTIFICATE OF DISPOSAL FOR NON-HAZARDOUS WASTE

CWM CHEMICAL SERVICES, L.L.C. has received waste material from OLIN CORPORATION on 10/30/00 as described on Shipping Document number 0000X10272 Sequence number 01.

Profile Number: CN6859 CWM Tracking ID: 8153547101

CWM Unit #: 1\*0 Disposal Date: 11/02/00

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Johna Ames-Cassick

DONNA AMES-CASSICK COMPLIANCE MANAGER Certificate # 191894 11/03/00

For questions please call our Customer Service Dept. at (800) 843-3604

	NON-HAZARDOUS	1. Generator's US	S EPA ID No.	Manifest Doc. No.	2. Page	1	*****************		
	WASTE MANIFEST	å.	1 · 4 · 0 · 3 · 1 · 0 · 4	1 .0 .2 .7 .1	of 1	1			
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1			N, MA 01887			SAM	E		
1	4. Generator's Phone ( 978 ) 658-612	יידים ווידים	STEVE MORRO	W					
	5. Transporter 1 Company Name		6. US EPA ID I		A. Trans	porter's P	hone		
	İ	TNC -	C-T-D-9-8-3-8	-9-6-3-4-1	1 8	60-34	2-066	57	
ı	7. Transporter 2 Company Name	1.(1)	8. US EPA ID I		B. Trans	porter's F	hone		
١									
	9. Designated Facility Name and Site Address		10. US EPA ID I	Yumber	C. Facilit	y's Phone			
ı	CWM CHEMICAL SERVICES, LLC			4					
ı	1550 BALMER ROAD		·						
1	MODEL CITY NY 14107		N-Y-D-0-4-9-8	-3-6-6-7-9	<u> </u>	<u> 16-75</u>	4-82		···
ı	11. Waste Shipping Name and Description			•		12. Cont	ainers	13. Total	14. Unit
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۱	D. Additional Descriptions for Materials Listed Abov	ve .			E. Handi	ing Codes	for Was	ites Listed Above	
	15. Special Handling Instructions and Additional Info	ormation		Weight FB # 104	1 1'0	00	Air	and of	ø
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ı			Constant of the constant are not a	PILLORS	100			1 1 1	
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LOGANO				
800-272-3867	800-272-3867		RETURN # :	
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	Ø:0 AM Ø:0 AM 6 MIL		FB #: 111111	104477
PULOC: 51 EAMES ST. 51 EAMES ST.	ð1887	BILL TO:	SEVENSON ENVIRON 2749 LOCKPORT RO NIAGRA FALLS, NY 716-284-0431	AD
PAPERWORK: BRING CONTAINER: 1-3@B/T	MATERIAL: PRO RATE:	HZ TRANS	PO #:	a.e.
COMMENTS:		REQUESTED E DATE / TIME:	3Y: JEFF 10/24/2000	17:28 PM
C.O.D. PENDING PO # E6729009				
Aproval	# CN68	59		
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CONSIGNEE: CWM MODEL CITY, N'		CILITY / 15	550 BALMER ROAD Ph:800-7	54-0455
DELIVERY LOCATION DIRECTIONS: RTE	E 18N FOLLOW: AT TRUCK/PLA	5 MILES TAI NT ENTRANCE	KE A RIGHT ONTO E	ALMER RD. FO
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COMMENTS:				•
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The undersigned acknowledges that he/she has instru The undersigned hereby releases the delivering com delivering vehicle or container. Such damage shall inc	pany and driver from all	damages and claims	s caused by the weight and/or h	eight and/or width of the buildings, structures, etc.

CUSTOMER

Date



#### WASTE MANAGEMENT, INC.

CWM Chemical Services, L.L.C. 1550 Balmer Rd. P.O. Box 200 Model City, N.Y. 14107 716/754-8231

Federal EPA ID: NYD049836679

OLIN CORPORATION
ATTN: ENVIRONMENTAL COMPLIANCE
MADO01403104
51 EAMES ST
WILMINGTON MA 01887-3393

### CERTIFICATE OF DISPOSAL FOR NON-HAZARDOUS WASTE

CWM CHEMICAL SERVICES, L.L.C. has received waste material from OLIN CORPORATION on 10/30/00 as described on Shipping Document number X000010271 Sequence number 01.

Profile Number: CN6859 CWM Tracking ID: 8153546601

CVM Unit #: 1\*0 Disposal Date: 11/02/00

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Jonna ames- Cussick

DONNA AMES-CASSICK COMPLIANCE MANAGER Certificate # 191893 11/03/00

For questions please call our Customer Service Dept. at (800) 843-3604

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,	NON-HAZARDOUS	1. Generator's US EPA ID No.	Manifest Doc. No	o. 2. Pag	e 1			
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A	3. Generator's Name and Mailing Address	OLIN CORPORATION						
T		51 EAMES STREET						
Н		THE MENOTIONS MA 01887		İ	SAM	E		
	4. Generator's Phone ( 978 ) 658-612	ATIN: STEVE MO						
	5. Transporter 1 Company Name	6. US EP	A ID Number	A. Tran	sporter's P	none		
	WASTE MANAGEMENT N.E.E.T.	TNC. C.T.D.9.8.	3 - 8 - 9 - 6 - 3 - 4 - 1		860-34	2-066	7	
	7. Transporter 2 Company Name	8. USEP	A ID Number	B. Trai	sporter's F	hone		
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	Designated Facility Name and Site Address	10. US EP	A ID Number	C. Fac	lity's Phone	•		
	CWM CHEMICAL SERVICES, LLC							
	1550 BALMER ROAD							
	MODEL CITY, NY 14107	N· Y· D· Q · 4 ·	9 • 8 • 3 • 6 • 6 • 7 • 9		<u>716-75</u>	<u>4-823</u>		
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CONSIGNEE. MOD	EL CITY, NY	DISPOSAL FAC 14107-0200	CILITY X 15	50" BALMER ROAD Ph:800-7	54-0455
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COMMENTS:			• -		
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The undersigned acknowledges of the undersigned hereby release delivering vehicle or container.	is the delivering compar	ny and driver from all d	lamages and claims	caused by the weight and/or he	eight and/or width of the
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CWM Chemical Services, L.L.C. 1550 Balmer Rd. P.O. Box 200 Model City, N.Y. 14107 716/754-8231

Federal EPA ID: MYD049836679

OLIN CORPORATION
ATTN: ENVIRONMENTAL COMPLIANCE
MADO01403104
51 EAMES ST
WILMINGTON MA 01887-3393

#### CERTIFICATE OF DISPOSAL FOR NON-HAZARDOUS WASTE

CWM CHEMICAL SERVICES, L.L.C. has received waste material from OLIN CORPORATION on 10/30/00 as described on Shipping Document number 0000X10270 Sequence number 01.

Profile Number: CN6859 CWM Tracking ID: 8153547301

CWM Unit #: 1\*0
Disposal Date: 11/02/00

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Jonna ames- Cussick

DONNA AMES-CASSICK COMPLIANCE MANAGER Certificate # 191896 11/03/00

For questions please call our Customer Service Dept. at (800) 843-3604 Drum Removal RAM, Status Report No. 2 and Completion Statement Olin Corporation July 12, 2001

SHIPPING DOCUMENTS – OVERPACK DRUMS, HAZARDOUS
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DEPARTMENT OF ENVIRONMENTAL CONSERVATION DIVISION OF SOLID & HAZARDOUS MATERIALS

## **HAZARDOUS WASTE MANIFEST**

P.O. Box 12820, Albany, New York 12212

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18	18. Transporter 2 Acknowledgement of Receipt of Mater	rials	***************************************							
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FACILITY	20. Facility Owner or Operator: Certification of receipt or Printed/Typed Name	n hazardous mate	orials covered by the	is manifest exc	ept as note	od in Hem	19.			



CWM Chemical Services, L.L.C. 1550 Balmer Rd. P.O. Box 200 Model City, N.Y. 14107 716/754-8231

Federal EPA ID: NYD049836679

OLIN CORPORATION

ATTN: ENVIRONMENTAL COMPLIANCE

MAD001403104 51 EAMES ST

WILMINGTON MA 01887-3393

#### CONFIRMATION OF DESTRUCTION

CWM CHEMICAL SERVICES, L.L.C. has received waste material from OLIN CORPORATION on 02/02/01 as described on Hazardous Waste Manifest number NYB9446517 Sequence number 04.

Profile Number: CN6875

CWM Tracking ID: 8153958004 CWM Unit #: 1\*0 thru 7\*0

Disposal Date: 03/02/01

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Jonna ames-Cussick

DONNA AMES-CASSICK COMPLIANCE MANAGER Certificate # 200182 03/22/01

For questions please call our Customer Service Dept. at (800) 843-3604





CWM Chemical Services, L.L.C. 1550 Balmer Rd. P.O. Box 200 Model City, N.Y. 14107 716/754-8231

Federal EPA ID: NYD049836679

OLIN CORPORATION ATTN: ENVIRONMENTAL COMPLIANCE MADO01403104 51 EAMES ST WILMINGTON MA 01887-3393

#### CONFIRMATION OF DESTRUCTION

CWM CHEMICAL SERVICES, L.L.C. has received waste material from OLIN CORPORATION on 02/02/01 as described on Hazardous Waste Manifest number NYB9446517 Sequence number 02.

Profile Number: CK5110
CWM Tracking ID: 8153958002
CWM Unit #: 1\*0 thru 6\*0
Disposal Date: 03/25/01

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Jonna ames- Cussick

DONNA AMES-CASSICK COMPLIANCE MANAGER Certificate # 202182 04/12/01

For questions please call our Customer Service Dept. at (800) 843-3604



CWM Chemical Services, L.L.C. 1550 Balmer Rd. P.O. Box 200 Model City, N.Y. 14107 716/754-8231

Federal EPA ID: NYD049836679

OLIN CORPORATION

ATTN: ENVIRONMENTAL COMPLIANCE

MAD001403104 51 EAMES ST

WILMINGTON MA 01887-3393

#### CONFIRMATION OF DESTRUCTION

CWM CHEMICAL SERVICES, L.L.C. has received waste material from OLIN CORPORATION on 02/02/01 as described on Hazardous Waste Manifest number NYB9446517 Sequence number 01.

Profile Number: CN6876
CWM Tracking ID: 8153958001
CWM Unit #: 1\*0 thru 14\*0
Disposal Date: 03/02/01

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

onna ames- Cassick

DONNA AMES-CASSICK COMPLIANCE MANAGER Certificate # 200181 03/22/01

For questions please call our Customer Service Dept at (800) 843-3604

Drum Removal RAM, Status Report No. 2 and Completion Statement Olin Corporation July 12, 2001

SHIPPING DOCUMENTS	– OVERPACK DRUMS,	, NON-HAZARDOUS



EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

# HAZARDOUS WASTE MANIFEST (As Required By The Alabama Department of Environmental Management)

Pie	ease print or type. (Form designed for use on elite	(12-pitch) typewriter.)				Form Approved.	DM8 No. 20	350-0039. Expires 9-30-91
Ā	UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID	Do	Manifest curgent No-		not req	uired by	ne shaded areas is Federal law.
	3. Generator's Name and Meiling Address OLIN CORPORATION 51 EAMES ST	Patricular temporary and the second second			CM	enifest Document		914567
	4 TEMINSTON 4. Generater's Phone ( 573) 534-513	31857-5390 31				enerator's ID	<u></u>	<u> </u>
	5. Transporter 1 Company Name	6.	US EPA ID Num	iber	1	ansporter's ID		7 92 4 × 11
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	7. Transporter 2 Company Name	<b>a</b> .	US EPA ID Num	ber		ensporter's ID	······································	
	9. Designated Facility Name and Site Addres	ss 10.	US EPA ID Num	nher	G. State F		····	
	CHEMICAL WASTE MANAGEMENT, INC							İ
	Emelle Facility	•			H. Facility			
	Alabama Highway 17 at Mile Marker 163 Emelle, Alabama 35459	LA L	0 0 0 0 6 2	2 4 6 4	20:	<u>5/652-9</u>	<del>3</del> 721	
	11. US DOT Description (Including Proper Shipping	g Name, Hazard Class, and i	D Number)	12. Cont No.	Type	13. Total Quantity	14. Unit Wt/Vo	l. Waste No.
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Waste Management, Inc. Emelle Facility P.O. Box 55 Emelle, Alabama 35459-0055 (205)652-9721

OLIN CORPORATION 51 EAMES STREET

**WILMINGTON, MA 01887-3393** 

Site Information:

OLIN CORPORATION 51 EAMES STREET

WILMINGTON, MA 01887-3393

#### ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generator Name: OLIN CORPORATION

Enclosed is/are your Generator Number Two copy / copies for Alabama Manifest Numbers:

CWMA-0000914567

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b), this letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approval waste profile submitted for this/these wastes.

As of September 26, 1997, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under a AHWMMA Permit, issued by the Alabama Department of Environmental Management, (RCRA)

Dorothy Oliver / Recordkeeping and Reporting Supervisor

May 01, 2001



Waste Management, Inc. Emelle Facility P.O. Box 55 Emelle, Alabama 35459-0055 (205)652-9721

OLIN CORPORATION 51 EAMES STREET

**WILMINGTON, MA 01887-3393** 

Site Information:

OLIN CORPORATION 51 EAMES STREET

**WILMINGTON, MA 01887-3393** 

#### ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generator Name: OLIN CORPORATION

Enclosed is/are your Generator Number Two copy / copies for Alabama Manifest Numbers:

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This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b), this letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approval waste profile submitted for this/these wastes.

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Dorothy Oliver / CR Recordkeeping and Reporting Supervisor

April 25, 2001

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Date

HIPPER'S SIGNATURE



# HAZARDOUS WASTE MANIFEST (As Required By The Alabama Department of Environmental Management)

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CHEMICAL WASTE MANAGEMENT, IN	1C.		•				
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Alabama Highway 17 at Mile Marker 163 Emelle, Alabama 35459		A L D 0 0 0	6   2   2   4   6   4	20	<u>05/652-9</u>	<i>i</i> 72 <u>1</u>	
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16 GENERATOR'S CERTIFICATION: I hereby name, and are classified, packaged, marked and	declare that the cor	ntents of this consignment ar	e fully and accurately di	lescribed	above by the proper	shipping temationa	ıt .
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Drum Removal RAM, Status Report No. 2 and Completion Statement Olin Corporation July 12, 2001

SHIPPING DOCUMENTS - METAL DEBRIS

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A	3. Generator's Name and Mailing Address	OLIN CORPO	DRATION							
T		51 EAMES S	STREET -	•		SAM	E			
		WILMINGTON	N, MA 01887							
	4. Generator's Phone ( 978 ) 658-612.	1 ATIN	N: STEVE MORRO				,,,,,,,,,,			
	5. Transporter 1 Company Name		6. US EPA IC	Number	A. Trar	isporter's P	hone			
1	WASTE MANAGEMENT N.E.E.T.,	INC.	C-T-D-9-8-3-1		86	<u>0-342-</u>	0667			
	7. Transporter 2 Company Name		8. US EPA ID	Number	B. Tran	isporter's F	hone			
	9. Designated Facility Name and Site Address CWM CHEMICAL SERVICES, LLC		10. US EPA ID	Number	C. Faci	lity's Phone	none			
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	11. Waste Shipping Name and Description					12. Conta	ainers	_13.	14.	
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	16. GENERATOR'S CERTIFICATION: I certify the ma	atenals described above	ve on this manifest are not	subject to federal requisit	ons for m	porting proc	ar dienoo	al of Hazardous W	to	
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CWM Chemical Services, L.L.C. 1550 Balmer Rd. P.O. Box 200 Model City, N.Y. 14107 716/754-8231

Federal EPA ID: NYD049836679

OLIN CORPORATION ATTN: ENVIRONMENTAL COMPLIANCE MAD001403104 51 EAMES ST WILMINGTON MA 01887-3393

### CERTIFICATE OF DISPOSAL FOR NON-HAZARDOUS WASTE

CWM CHEMICAL SERVICES, L.L.C. has received waste material from OLIN CORPORATION on 11/07/00 as described on Shipping Document number 0000011040 Sequence number 01.

Profile Number: CN6859 CWM Tracking ID: 8153592701

CWM Unit #: 1\*0

Disposal Date: 11/07/00

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Sonna ames- Cussick

DONNA AMES-CASSICK COMPLIANCE MANAGER Certificate # 192298 11/08/00

For questions please call our Customer Service Dept. at (800) 843-3604

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		WILMINGTON, MA 0	1887				
	4. Generator's Phone ( 978 ) 658-6121	ATIN: STEV	E MORROW				<u>,</u>
	5. Transporter 1 Company Name	6. I	US EPA ID Number	A. Tra	nsporter's Phor	ne ne	
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	15. Special Handling Instructions and Additional Inform	nation					
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	16. GENERATOR'S CERTIFICATION: I certify the ma  Printed/Typed Name			al regulations for a	reporting proper of		
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L	20. Facility Owner or Operator: Certification of receipt	of waste materials covered by t	his manifest except as not	ed in Item 19.			
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CWM Chemical Services, L.L.C. 1550 Balmer Rd. P.O. Box 200 Model City, N.Y. 14107 716/754-8231

Federal EPA ID: NYD049836679

OLIN CORPORATION ATTN: ENVIRONMENTAL COMPLIANCE MADO01403104 51 EAMES ST WILMINGTON MA 01887-3393

## CERTIFICATE OF DISPOSAL FOR NON-HAZARDOUS WASTE

CWM CHEMICAL SERVICES, L.L.C. has received waste material from OLIN CORPORATION on 11/07/00 as described on Shipping Document number 0000011041 Sequence number 01.

Profile Number: CN6859

CWM Tracking ID: 8153592101

CWM Unit #: 1\*0

Disposal Date: 11/07/00

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Jonna ames- Cussick

DONNA AMES-CASSICK COMPLIANCE MANAGER Certificate # 192296 11/08/00

For questions please call our Customer Service Dept. at (800) 843-3604

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T .	3. Generator's Name and Mailing Address	OLIN CORPORA		<u></u>	***************************************	***************************************		······································	
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Ш		WITMINGTON.		•		SAME			
	4. Generator's Phone ( 978 ) 658-6121	ATTN: STE							
	5. Transporter 1 Company Name	6.	US EPA ID Num	nber	A. Trar	sporter's P	hone		
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	7. Transporter 2 Company Name	8.	US EPA ID Num	nber	B. Trer	sporter's P	hone		
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H	9. Designated Facility Name and Site Address CWM CHEMICAL SERVICES, LLC	10.	US EPA ID Num	nber	C. Fac	lity's Phone			
	1550 BALMER ROAD			•					
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	16. GENERATOR'S CERTIFICATION: I certify the r	naterials described above or		ict to federal regula	tions for n	eporting prop	er dispos		
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	18. Transporter 2 Acknowledgement of Receipt of N	Iaterials							
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CWM Chemical Services, L.L.C. 1550 Balmer Rd. P.O. Box 200 Model City, N.Y. 14107 716/754-8231

Federal EPA ID: NYD049836679

OLIN CORPORATION

ATTN: ENVIRONMENTAL COMPLIANCE

MAD001403104 51 EAMES ST

WILMINGTON MA 01887-3393

#### CERTIFICATE OF DISPOSAL FOR NON-HAZARDOUS WASTE

CWM CHEMICAL SERVICES, L.L.C. has received waste material from OLIN CORPORATION on 11/03/00 as described on Shipping Document number 0000011020 Sequence number 01.

Profile Number: CN6859 CWM Tracking ID: 8153576201

CWM Unit #: 1\*0

Disposal Date: 11/03/00

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Jonna ames-Cussick

DONNA AMES-CASSICK COMPLIANCE MANAGER Certificate # 192057 11/06/00 For questions please call our Customer Service Dept. at (800) 843-3604 Drum Removal RAM, Status Report No. 2 and Completion Statement Olin Corporation July 12, 2001

## Appendix F

Air Monitoring Data and Records

Table F1. Summary of Tentatively Identified Compounds in Time Weighted Air Samples<sup>1</sup> 51 Eames Street Wilmington, Massachusetts

Sample Date	Sample ID	Lab ID	Compound	Method	Detected Result	Units	Map ID
8/8/00	Upwind	9334B	Acetone	TIC	132	ppbv	1-W
0,0,00		9334B	Butanoic acid, 2-methylpropyl ester	TIC	112	ppbv	1-W
		9334B	Butanoic acid, butyl ester	TIC	218	ppbv	1-W
		9334B	Butanoic acid, ethyl ester	TIC	344	ppbv	1-W
		9334B	Butanoic acid, propyl ester	TIC	296	ppbv	1-W
		9334B	Hexanoic acid, ethyl ester	TIC	321	ppbv	1-W
		93348	Pentanoic acid, ethyl ester	TIC	167	ppbv	1-W
8/15/00	North Side A	93023	2.2,4-trimethyl pentane	TIC	424	ppbv	2-N
0/ 10/00	110111 0100 / 1	93023	2,2,5,5-tetramethyl hexane	TIC	144	vdqq	2-N
		93023	2,2,5-trimethyl hexane	TIC	206	vdag	2-N
		93023	2,3,4-trimethyl pentane	TIC	257	ppbv	2-N
	North Side B	9349B	2,2,4-trimethyl pentane	TIC	240	ppbv	1-N
	. 10.11. 0.120	9349B	2,2,5-trimethyl hexane	TIC	104	vdqq	1-N
		93498	2,3,4-trimethyl pentane	TIC	160	ppby	1-N
	North Side Soil Pad	11373	2,2,4-trimethyl pentane	TIC	132	ppbv	3-N
	110101 0100 0011 00	11373	Acetone	TIC	538	ppbv	3-N
		11373	Nitromethane	TIC	262	ppbv	3-N
8/17/00	Gate to Bio Pad	93214	1-methyl-3-(1-methylethyl) benzene	TIC	578	ppbv	3-S
0/1/100	Care to Dio : da	93214	1-methyl-4-(1-methylethyl) 1,3-cyclohexadiene	TIC	707	ydag	3-S
		93214	1-methyl-4-(1-methylethyl) 1,4-cyclohexadiene	TIC	388	ppbv	3-S
		93214	2,2,4,6,6-pentamethyl heptane	TIC	243	ppbv	3-S
		93214	2,2,6-trimethyl decane	TIC	128	ppby	3-S
		93214	2,2,6-trimethyl octane	TIC	100	ppbv	3-S
		93214	Trimethyl 1,3-cyclopentadiene	TIC	115	ppbv	3-S
	North Side A	12610	1-methyl-3-(1-methylethyl) benzene	TIC	288	ppbv	2-N
	INOIGH GIGG A	12610	1-methyl-4-(1-methylethyl) 1,3-cyclohexadiene	TIC	610	ppbv	2-N
		12610	1-methyl-4-(1-methylethyl) 1,4-cyclohexadiene	TIC	240	ppby	2-N
		12610	2,2,4,6,6-pentamethyl heptane	TIC	142	ppbv	2-N
	North Side B	A305	1-methyl-4-(1-methylethyl) 1,3-cyclohexadiene	Tic	1319	ppbv	1-N
	140111 3/46 5	A305	1-methyl-4-(1-methylethyl) benzene	TIC	487	ppbv	1-N
		A305	1-methyl-4-(1-methylethyl) cyclohexene	TIC	647	ppby	1-N
		A305	2,2,3-trimethyl hexane	TIC	101	ppbv	1-N
		A305	2,2-dimethyl octane	TIC	147	ppbv	1-N
		A305	2-methyl decane	TIC	112	ppbv	1-N
		A305	Trimethyl-1,3-cyclopentadiene	TIC	135	ydqq	1-N
	North Side Soil Pad	12832	1-methyl-3-(1-methylethyl) benzene	TIC	740	ppbv	3-N
	NOTE SIDE SOFFEE	12832	1-methyl-4-(1-methylethyl) 1,4-cyclohexadiene	TIC	417	ppbv	3-N
		12832	2,2-dimethyl octane	TIC	155	ppbv	3-N
		12832	2-methyl decane	TIC	108	ppbv	3-N
		12832	4-ethyl-2,2,6,6-tetramethyl heptane	TIC	298	ppbv	3-N
*		12832	Dimethyl tetrasulphide	TIC	238	ppbv	3-N
				TIC	396	ppbv	3-N
		12832 12832	Dimethyl trisulfide Limonene	TIC	118	ppby	3-N
210000	Black of A	04421	1-methyl-4-(1-methylethyl) 1,3-cyclohexadiene	TIC	145	ppbv	2-N
8/25/00	North of A			Tic	120	ppbv	1-N
8/26/00	North of B	9304B 9153B	Hexane	TIC	112	ppbv	3-N
0.00.00	North of Debns/Soil Pile		12,2,4-trimethyl hexane   1-methyl-3-(1-methylethyl) benzene	TIC	252	ppby	2-WZ
8/29/00	Work Zone A	12311	······································	TIC	136	ppby	2-SW
8/30/00	SW of Area A	8818B	Dimethyl disuffide	TIC	144	, ,,	2-SW
		8818B	Dimethyl trisulfide			ppbv	2-SW
9/11/00	SW of Drum Area A	93020	2,6,10-trimethyl dodecane	TIC	501	ppbv	
		93020	Nonadecane	TIC	110	ppbv	2-SW
		93020	Pentadecane	TIC	123	ppby	2-SW
	[	93020	Tetradecane	TIC	155	ppbv	2-\$W

- General Notes:

  1. TIC = Tentatively Identified Compound.
- 2. ppbv = parts per billion by volume.
- 3. Map ID = sample locations are identified in Figure 1.

1. Dnly numerical results for compounds with a detected concentration equal to or greater than 100 ppbv are shown. Refer to the laboratory data sheets for results of all detected compounds.

Table F2. Summary of Detected VOCs in Time Weighted Air Samples Olin Chemical Property 51 Eames Street Wilmington, Massachusetts

Sample Date	Sample ID	Lab ID	Compound	Method	Detected Result	Units	Map ID
8/2/00	North Side of Drum Area A	12301	Benzene	TO-15	2	ppbv	2-N
		12301	Toluene	TO-15	3.2	ppbv	2-N
		12301	Total VOC	TO-15	5.2	ppbv	2-N
	North Side of Drum Area B	0183	Benzene	TO-15	1.2	ppbv	1-N
		0183	Toluene	TO-15	2.4	ppbv	1-N
		0183	Total VOC	TO-15	3.6	ppbv	1-N
	Pad Area	11412	Benzene .	TO-15	1.4	ppbv	3-N
		11412	Benzyl chloride	TO-15	1.4	ppbv	3-N
		11412	Toluene	TO-15	4.2	ppbv	3-N
		11412	Total VOC	TO-15	7	ppbv	3-N
	Upwind	93242	1,3,5-Trimethylberizene	TO-15	3.3	ppbv	1-E
		93242	Benzene	TO-15	1.3	ppbv	1-E
		93242	Toluene	TO-15	2.9	ppbv	1-E
		93242	Total VOC	TO-15	7.5	ppbv	1-€
3/7/00	North Side A	12474	Benzyl chloride	TO-15	2.1	ppbv	2-N
,,,,,,		12474	Total VOC	TO-15	2,1	ppbv	2-N
	North Side B	809	Benzene	TO-15	1.3	ppbv	1-N
	740727 0100 5	809	Benzyl chloride	TO-15	4	ppbv	1-N
		809	Methylene Chloride	TO-15	1.7	ppbv	1-N
		809	Toluene	TO-15	3.7	ppbv	1-N
	}	809	Total VOC	TO-15	10.7	ppbv	1-N
	North Side of Soil/Debris Pad	93294	Benzyl chloride	TO-15	1.5	ppbv	3-N
	TYOLUT OLGO OL COM SOBILG L GG	93294	Total VOC	TO-15	1.5	ppbv	3-N
3/8/00	Pad Area	9102B	Toluene	TO-15	1	ppbv	3-N
,,0,00	Lad Vica	9102B	Total VOC	TO-15	1	ppbv	3-N
	Upwind	9334B	1,2,4-Trimethylbenzene	TO-15	1.8	vdqq	1-W
	Opwind	9334B	1,3-Butadiene	TO-15	2.4	ppbv	1-W
		9334B	cis-1,3-dichloropropene	TO-15	2.7	ppbv	1-W
		9334B	Ethyl berizene	TO-15	3.1	ppbv	1-W
		9334B	m,p-Xylene	TO-15	2.8	ppbv	1-W
		9334B	Methyl f-butyl ether (MTBE)	TO-15	7.3	ppbv	1-W
		9334B	o-Xylene	TO-15	1.8	ppbv	1-W
		9334B	Toluene	TO-15	3.7	ppbv	1-W
		9334B	Total VOC	TO-15	25.6	ppbv	1-W
3/9/00	North Side A	11291	1,1,2-Trichloroethane	TO-15	1.1	ppbv	2-N
79/00	livorm side A			TO-15	1.9	1	2-N
	*	11291	1,2,4-Trichloroberizene Hexachlorobutadiene	TO-15	2.2	ppbv	2-N
		11291		1	1	ppbv	4
		11291	Tetrachloroethene	TO-15	7.4	ppbv	2-N
		11291	Toluene	TO-15	1.7	ppbv	2-N
		11291	Total VOC	TO-15	14.3	ppbv	2-N
	North Side B	93017	1,1,2-Trichloroethane	TO-15	0.9	ppbv	1-N
		93017	Benzyl chloride	TO-15	1	ppbv	1-N
		93017	Toluene	TO-15	1.2	ppbv	1-N
		93017	Total VOC	TO-15	3.1	ppbv	1-N
	Upwind	0164	Berizyl chloride	TO-15	1.8	ppbv	1-W
		0164	Toluene	TO-15	1.3	ppbv	1-W
		0164	Total VOC	TO-15	3.1	ppbv	1-W

Table F2. Summary of Detected VOCs in Time Weighted Air Samples Olin Chemical Property 51 Eames Street Wilmington, Massachusetts

Sample Date	Sample ID	Lab ID	Compound	Method	Detected Result	Units	Map ID
8/15/00	Gate to Bio Pad	9624B	Toluene	TO-15	15.1	ppbv	3-S
0, 10,00		9624B	Total VOC	TO-15	30.2	ppbv	3-S
	North Side A	93023	1,1,2,2-Tetrachioroethane	TO-15	1.9	ppbv	2-N
		93023	1,2,4-Trichlorobenzene	TO-15	2.3	ppbv	2-N
		93023	1,2,4-Trimethylbenzene	TO-15	2.4	ppbv	2-N
		93023	1,2-Dichlorobenzene	TO-15	1	ppbv	2-N
		93023	1,3,5-Trimethylbenzene	TO-15	2.3	ppbv	2-N
	-	93023	1,4-Dichiorobenzene	TO-15	1.4	ppbv	2-N
		93023	Benzyl chloride	TO-15	1.3	ppbv	2-N
		93023	Chlorobenzene	TO-15	1.7	ppbv	2-N
		93023	Ethyl benzene	TO-15	1.1	ppbv	2-N
		93023	Hexachiorobutadiene	TO-15	1.6	ppbv	2-N
		93023	m,p-Xylen <b>e</b>	TO-15	2.3	ppbv	2-N
		93023	Tetrachloroethene	TO-15	1.9	ppby	2-N
		93023	Toluene	TO-15	5	ppby	2-N
		93023	Total VOC	TO-15	52.4	ppby	2-N
	North Side B	9349B	1,2,4-Trichlorobenzene	TO-15	1.3	ppbv	1-N
	Morth 2006 p	9349B	1,2,4-Trimethylbenzene	TO-15	1.3	ppbv	1-N
		9349B	m,p-Xylene	TO-15	1.4	ppby	1-N
		9349B	o-Xylene	TO-15	1.2	ppby	1-N
	1	9349B	Toluene	TO-15	5.8	ppbv	1-N
		9349B	Total VOC	TO-15	22	ppbv	1-N
	North Side Soil Pad	11373	Tetrachloroethene	TO-15	6.7	ppbv	3-N
	North Side Soil Fad	11373	Toluene	TO-15	2.2	ppbv	3-N
		11373	Total VOC	TO-15	17.8	ppbv	3-N
0/47/00	0-1-1-0-4	93214	Benzene	TO-15	1.1	ppbv	3-S
8/17/00	Gate to Bio Pad	93214	Benzyl chloride	TO-15	4.6	ppbv	3-S
		5	Toluene	TO-15	5.7	ppbv	3-5
		93214	Total VOC	TO-15	27.4	ppbv	3-S
		93214	T Comments	TO-15	2.3	ppbv	3-S
		93214	Trichlorofluoromethane (11)	TO-15	2.4	ppbv	2-N
	North Side A	12610	Benzyl chloride	TO-15	3.6	ppbv	2-N
		12610	Toluene	TO-15	14.8	ppbv	2-N
		12610	Total VOC	TO-15		ppbv	2-N
		12610	Trichlorofluoromethane (11)		1.4 5.1	<del></del>	1-N
	North Side B	A305	Benzyl chloride	TO-15		ppbv	1-N
		A305	Toluene	TO-15	8.8	ppbv	l .
		A305	Total VOC	TO-15	34.6	ppbv	1-N
		A305	Trichlorofluoromethane (11)	TO-15	3.4	ppbv	1-N
	North Side Soil Pad	12832	Benzene	TO-15	18.7	ppbv	3-N
		12832	Berizyl chloride	TO-15	4.6	ppbv	3-N
		12832	Ethyl benzene	TO-15	1	ppbv	3-N
		12832	m,p-Xylene	TO-15	1.1	ppbv	3-N
		12832	o-Xylene	TO-15	1.5	ppbv	3-N
	1	12832	Toluene	TO-15	41.2	ppbv	3-N
		12832	Total VOC	TO-15	141.6	ppbv	3-N
		12832	Trichlorofluorometharie (11)	TO-15	2.7	ppbv	3-N

Table F2. Summary of Detected VOCs in Time Weighted Air Samples Olin Chemical Property 51 Eames Street Wilmington, Massachusetts

Sample Date	Sample ID	Lab ID	Compound	Method	Detected Result	Units	Map ID
8/25/00	Gate to Bio Pad	92092	Methylene Chloride	TO-15	2.3	ppbv	3- <b>S</b>
		92092	Toluene	TO-15	14.1	ppbv	3-S
		92092	Total VOC	TO-15	16.4	ppbv	3-S
	North of A	04421	1,1,2,2-Tetrachloroethane	TO-15	1.4	ppbv	2-N
		04421	Ethyl benzene	TO-15	1.6	ppbv	2-N
		04421	m,p-Xylene	TO-15	1.8	ppbv	2-N
		04421	o-Xylene	TO-15	1.6	ppbv	2-N
		04421	Tetrachioroethene	TO-15	1.4	ppbv	2-N
		04421	Toluene	TO-15	15.4	ppbv	2-N
		04421	Total VOC	TO-15	24.7	ppbv	2-N
		04421	Trichloroethene	TO-15	1.5	ppbv	2-N
	North of B	93208	Benzene	TO-15	1.2	ppbv	1-N
		93208	Ethyl benzene	TO-15	1	ppbv	1-N
		93208	m,p-Xylene	TO-15	1.4	ppbv	1-N
	İ	93208	Methylene Chloride	TO-15	3.2	ppbv	1-N
		93208	Toluene	TO-15	50.1	ppbv	1-N
		93208	Total VOC	TO-15	65.8	ppbv	1-N
		93208	trans-1,3-dichloropropene	TO-15	1.2	ppbv	1-N
	, , , , , , , , , , , , , , , , , , , ,	93208	Trichloroethene	TO-15	7.7	ppbv	1-N
	North of Debris/Soil Pad	93139	Toluene	TO-15	13.2	ppbv	3-N
	1	93139	Total VOC	TO-15	13.2	ppbv	3-N
3/26/00	Gate to Bio Pad	11208	Benzeп <b>e</b>	TO-15	2	ppbv	3-S
		11208	m,p-Xylene	TO-15	1.3	ppbv	3-S
		11208	Methylene Chloride	TO-15	4.6	ppbv	3-S
		11208	Toluene	TO-15	88.6	ppbv	3-S
		11208	Total VOC	TO-15	98.6	ppbv	3-S
		11208	trans-1,3-dichloropropene	TO-15	2.1	ppbv	3-S
	North of A	03129	1,1,2-Trichloroethane	TO-15	4.7	ppbv	2-N
		03129	Benzene	TO-15	3.2	ppov	2-N
		03129	Ethyl benzene	TO-15	4.5	ppbv	2-N
		03129	m,p-Xylene	TO-15	5.7	ppbv	2-N
		03129	Methylene Chloride	TO-15	11.3	ppbv	2-N
		03129	o-Xylene	TO-15	2.2	ppbv	2-N
		03129	Styrene	TO-15	2.2	ррьу	2-N
		03129	Tetrachioroethene	TO-15	2.1	ррьу	2-N
		03129	Toluene	TO-15	132.1	ppbv	2-N
		03129	Total VOC	TO-15	171.5	ppbv	2-N
		03129	trans-1,3-dichloropropene	TO-15	3.5	ppbv	2-N
	North of B	9304B	Benzene	TO-15	13.8	ppbv	1-N
		9304B	Benzyl chloride	TO-15	3.1	ppbv	1-N
		9304B	Chloroethane	TO-15	1	ppbv	1-N
		9304B	Ethyl benzene	TO-15	1.1	ppbv	1-N
		9304B	m,p-Xylene	TO-15	1.3	ppbv	1-N
		9304B	Methylene Chloride	TO-15	42.4	ppbv	1-N
		9304B	Toluene	TO-15	190.6	ppbv	1-N
		9304B	Total VOC	TO-15	259.5	ppbv	1-N
	**	9304B	trans-1,3-dichloropropene	TO-15	5.2	ppbv	1-N
		9304B	Trichlorofluoromethane (11)	TO-15	1	ppbv	1-N
	North of Debris/Soil Pile	9153B	1,1,2-Trichloroethane	TO-15	7.4	ppbv	3-N
	TANKE OF DODING ONE ( NE	9153B	m,p-Xylene	TO-15	1.6	ppbv	3-N
		9153B	Methylene Chloride	TO-15	5.3	ppbv	3-N
	-	9153B	Toluene	TO-15	45.7	ppbv	3-N

Table F2.
Summary of Detected VOCs in Time Weighted Air Samples
Olin Chemical Property
51 Eames Street
Wilmington, Massachusetts

Sample Date	Sample ID	Lab ID	Compound	Method	Detected Result	Units	Map ID
8/28/00	Gate to Bio Pad	12424	Benzene	TO-15	2.9	ppbv	3-\$
		12424	Benzyl chloride	TO-15	1.3	ppbv	3-S
	·	12424	m,p-Xylene	TO-15	1.8	ppbv	3-S
		12424	Methyl t-butyl ether (MTBE)	TO-15	2.6	ppbv	3-S
		12424	Methylene Chloride	TO-15	3.6	ppbv	3-S
		12424	Toluene	TO-15	75.8	ppbv	3-S
		12424	Total VOC	TO-15	89.8	ppbv	3-S
		12424	trans-1,3-dichloropropene	TO-15	1.8	ppbv	3-S
	North of Area B	93277	Benzene	TO-15	2.5	ppbv	1-N
		93277	Benzyl chloride	TO-15	1.7	ppbv	1-N
		93277	Ethyl benzene	TO-15	1.4	ppbv	1-N
		93277	m,p-Xylene	TO-15	2.1	ppbv	1-N
		93277	Methyl t-butyl ether (MTBE)	TO-15	2.1	ppbv	1-N
		93277	Methylene Chloride	TO-15	4.4	ppbv	1-N
	· ·	93277	Toluene	TO-15	64.9	ppbv	1-N
		93277	Total VOC	TO-15	80.7	ppbv	1-N
		93277	trans-1,3-dichloropropene	TO-15	1.6	ppbv	1-N
	North of Debris/Soil Pad	12461	1,2,4-Trimethylberizene	TO-15	1.3	ppbv	3-N
		12461	Berizene	TO-15	3.7	ppby	3-N
		12461	Benzyl chloride	TO-15	3.6	ppbv	3-N
		12461	Ethyl benzene	TO-15	2.1	ppbv	3-N
	,	12461	m,p-Xylene	TO-15	2.9	ppbv	3-N
		12461	Methylene Chloride	TO-15	8.3	ppbv	3-N
		12461	o-Xylene	TO-15	1.6	ppbv	3-N
		12461	Toluene	TO-15	135.1	ppbv	3-N
		12461	Total VOC	TO-15	162.1	ppbv	3-N
		12461	trans-1,3-dichloropropene	TO-15	3.5	ppbv	3-N
	SW of Area A	A220	Ethyl benzene	TO-15	5.1	ppbv	2-SW
		A220	m,p-Xylene	TO-15	6.9	ppbv	2-SW
		A220	Methylene Chloride	TO-15	2.6	ppbv	2-SW
		A220	o-Xylene	TO-15	2.6	ppbv	2-SW
		A220	Styrene	TO-15	2.9	ppbv	2-SW
		A220	Tetrachloroethene	TO-15	1.4	ppbv	2-SW
		A220	Toluene	TO-15	61	ppbv	2-SW
		A220	Total VOC	TO-15	84	ppb∨	2-SW
	·	A220	trans-1,3-dichloropropene	TO-15	1.5	ppbv	2-SW
8/29/00	Work Zone A	12311	Benzyl chloride	TO-15	3.4	ppbv	2-WZ
0/2,5/00	WORK ZONE /	12311	Methylene Chloride	TO-15	3.2	ppbv	2-WZ
		12311	Toluene	TO-15	4.4	ppbv	2-WZ
		12311	Total VOC	TO-15	11	ppbv	2-WZ
8/30/00	East of 1st Gate to Bio Pad	12898	Toluene	TO-15	14	vdqq	3-S
0/30/00	Last of 1st date to Dio 1 ad	12898	Total VOC	TO-15	14	ppbv	3-S
	North of Area A	93141	Styrene	TO-15	7	ppbv	2-N
	Note: of Alex A	93141	Toluene	TO-15	12.7	ppbv	2-N
		93141	Total VOC	TO-15	19.7	ppbv	2-N
		93414	Styrene	TO-15	7	ppbv	2-N
	**************************************	93414	Toluene	TO-15	12.7	ppbv	2-N
		93414	Total VOC	TO-15	19.7	ppbv	2-N
	North of Debris/Soil Pad	93474	Benzyl chloride	TO-15	9.5	ppbv pp <b>b</b> v	3-N
	PAORITO DEBITS/SOR PAG	93300	- I	TO-15	1.6	ppbv	3-N
		7	m,p-Xylene	TO-15	2.9	ppbv Vdqq	3-N
		93300	Methylene Chloride		4.		
		93300	Toluene	TO-15	40	ppbv	3-N
	COMPLETE A DESCRIPTION OF THE PROPERTY OF THE	93300	Total VOC	TO-15	54	ppbv	3-N
	SW of Area A	8818B	Benzene	TO-15	1.2	ppbv	2-SW
		8818B	Benzyl chloride	TO-15	11.5	ppbv	2-SW
		8818B	Toluene	TO-15	26.1	ppbv	2-SW
		8818B	Total VOC	TO-15	38.8	ppbv	2-SW

Table F2. Summary of Detected VOCs in Time Weighted Air Samples Olin Chemical Property 51 Eames Street Wilmington, Massachusetts

Sample Date	Sample ID	Lab ID	Compound	Method	Detected Result	Units	Map ID
9/7/00	East of 1st Gate to BC	A301	Toluene	TO-15	4.7	ppbv	3-S
		A301	Toluene	TO-15	4.7	ppbv	3- <b>S</b>
		A301	Total VOC	TO-15	4.7	ppbv	3-S
		A301	Total VOC	TO-15	4.7	ppby	3-\$
	North of Area B	12618	1,1,2-Trichloroethane	TO-15	1.8	ppbv	1-N
		12618	Toluene	TO-15	17.8	ppbv	1-N
		12618	Total VOC	TO-15	19.6	ppbv	1-N
	North of Soil Pad	12467	Toluene	TO-15	8.2	ppbv	3-N
		12467	Total VOC	TO-15	8.2	ppbv	3-N
	SW of Drum Area A	93081	Toluene	TO-15	2.2	ppbv	2-SW
		93081	Total VOC	TO-15	2.2	ppbv	2-SW
9/8/00	East of 1st Gate to BC	93218	Toluene	TO-15	9	ppbv	3-S
		93218	Toluene	TO-15	9	ppbv	3-S
		93218	Total VOC	TO-15	9	ppbv	3-S
		93218	Total VOC	TO-15	9	ppbv	3-S
	North of Area B	12638	1,1,2-Trichloroethane	TO-15	7.4	ppbv	1-N
		12638	Toluene	TO-15	5.5	ppbv	1-N
		12638	Total VOC	TO-15	12.9	ppbv	1-N
	North of Concrete Soil Pad	12830	1,1,2-Trichloroethane	TO-15	1.9	ppbv	3-N
		12830	Benzyl chloride	TO-15	1.3	ppbv	3-N
		12830	Toluene	TO-15	6	ppbv	3-N
		12830	Total VOC	TO-15	9.2	ppbv	3-N
	SW of Area A	12155	Toluene	TO-15	1.9	ppbv	2-SW
		12155	Total VOC	TO-15	1.9	ppbv	2-SW
9/11/00	East of Gate to Bio Cal	93229	1,2,4-Trichlorobenzene	TO-15	1.2	ppbv	3-S
0, , ., 4+		93229	Benzyl chloride	TO-15	1.5	ppbv	3-S
		93229	Toluene	TO-15	1.5	ppbv	3-S
		93229	Total VOC	TO-15	4.2	ppb.	3-S
	North of Area B	9428BB	Toluene	TO-15	1.7	ppbv	1-N
	11012101100	9428BB	Total VOC	TO-15	1.7	ppbv	1-N
	North of Soil Pad	9605B	1,2,4-Trimethylbenzene	TO-15	2.7	ppbv	3-N
	Tropici or odnit ad	9605B	1,3,5-Trimethylbenzene	TO-15	2	ppbv	3-N
	1	9605B	Benzyl chloride	TO-15	2.8	ppbv	3-N
		9605B	Toluene	TO-15	9.5	ppbv	3-N
		9605B	Total VOC	TO-15	17	ppbv	3-N
	SW of Drum Area A	93020	1,2,4-Trichlorobenzene	TO-15	3.8	ppbv	2-SW
•	SVV OI DIGIN AICE A	93020	Hexachlorobutadiene	TO-15	3.5	ppbv	2-3W
	•	93020	Total VOC	TO-15	7.3	ppbv	2-SW
9/13/00	East of 1st Gate to BC	A304	1,2,4-Trichlorobenzene	TO-15	1.3	ppbv	2-5 VV 3-S
3/13/00	East of 1st Gate to bo	1		l l			
		A304 A304	Hexachlorobutadiene Toluene	TO-15 TO-15	1	ppby	3-S 3-S
		A304 A304	Total VOC	TO-15	1.2	ppbv	
	North of Area B	12256	Toluene	TO-15	3.2	ppbv	3-S
	North of Area p	4	Total VOC			ppbv	1-N
	North of Soil Pad	12256		TO-15	2	ppbv	1-N
	North of Soil Fac	9334B	Benzyl chloride	TO-15	2	ppbv	3-N
	<u>.</u>	9334B	Toluene	TO-15	7.3	ppbv	3-N
		93348	Total VOC	TO-15	9.3	ppbv	3-N

Table F2.
Summary of Detected VOCs in Time Weighted Air Samples
Olin Chemical Property
51 Eames Street
Wilmington, Massachusetts

Sample Date	Sample ID	Lab ID	Compound	Method	Detected Result	Units	Map ID
9/18/00	East of 1st Gate to Bio Cell	93120	Tetrachioroethene	TO-15	6.6	ppbv	3-S
		93120	Total VOC	TO-15	6.6	ppbv	3-S
	North of Area B	93047	1,1,2-Trichloroethane	TO-15	2.5	ppbv	1-N
	·	93047	Benzyl chloride	TO-15	1.1	ppbv	1-N
		93047	Tetrachloroethene	TO-15	1.6	ppbv	1-N
		93047	Toluene	TO-15	1	ppbv	1-N
		93047	Total VOC	TO-15	6.2	ppbv	1-N
	North of Concrete Soil Pad	12533	Tetrachloroethene	TO-15	2.4	ppbv	3-N
		12533	Total VOC	TO-15	2.4	ppbv	3-N
	SW of Drum Area A	93254	Benzyl chloride	TO-15	2.6	ppbv	2-SW
		93254	Tetrachloroethene	TO-15	20.8	ppbv	2-SW
		93254	Total VOC	TO-15	23.4	ppbv	2-SW
9/28/00	North Side of Bio Cell	11344	Benzene	TO-15	7.8	ppbv	4-N
		11344	Methylene Chloride	TO-15	1.3	ppbv	4-N
		11344	Toluene	TO-15	4.3	ppbv	4-N
		11344	Total VOC	TO-15	13.4	ppbv	4-N
	North Side of Debris Area	11412	Benzene	TO-15	4.2	ppbv	5-N
		11412	Total VOC	TO-15	4.2	ppbv	5-N
	South Side of Bio Cell	93242	Benzene	TO-15	3.5	ppbv	4-S
		93242	Benzyl chloride	TO-15	1.6	ppbv	4-S
		93242	Toluene	TO-15	1.3	ppbv	4-S
		93242	Total VOC	TO-15	6.4	ppbv	4-S
	South Side of Debris Area	0183	Benzene	TO-15	2.3	ppbv	5-S
		0183	Benzyl chloride	TO-15	2.3	ppbv	5-S
		0183	Methylene Chloride	TO-15	1.2	ppbv	5-S
		0183	Toluene	TO-15	1.4	ppbv	5-S
		0183	Total VOC	TO-15	7.2	ppbv	5-S
9/29/00	North Side of Bio Cell	92044	Benzene	TO-15	1.9	ppbv	4-N
		92044	Toluene	TO-15	1.3	ppbv	4-N
		92044	Total VOC	TO-15	3.2	ppbv	4-N
	North Side of Debris Area	93178	Benzene	TO-15	2.3	ppbv	5-N
		93178	Chloroform	TO-15	3.7	ppbv	5-N
		93178	Tetrachloroethene	TO-15	2.7	ppbv	5-N
		93178	Toluene	TO-15	1.7	ppbv	5-N
		93178	Total VOC	TO-15	10.4	ppbv	5-N
	South Side of Bio Cell	92025	Benzene	TO-15	1.7	ppbv	4-S
		92025	Chloroform	TO-15	2	ppbv	4-S
		92025	Chloromethane	TO-15	10.1	ppbv	4-S
		92025	Tetrachioroethene	TO-15	2.2	ppbv	4-S
		92025	Toluene	TO-15	1.8	ppbv	4-S
		92025	Total VOC	TO-15	20.8	ppbv	4-S
		92025	trans-1,3-dichloropropene	TO-15	3	ppbv	4-S
	South Side of Oebris Area	12488	Benzene	TO-15	1.4	ppbv	5-S
		12488	Toluene	TO-15	1.3	ppbv	5-S
		12488	Total VOC	TO-15	2.7	ppbv	5-S

#### General Notes:

- 1. VOCs = Volatile Organic Compounds.
- 2. ppbv = parts per billion by volume.
- 3. Map ID = sample locations are identified in Figure 1.

Drum Removal RAM, Status Report No. 2 and Completion Statement Olin Corporation July 12, 2001

**REAL-TIME WORK ZONE DATA** 

DATE:	8/2/00 4	NEDNESOAY	
TIME	INSTRUMENT	LOCATION	READING
1200	SIBATA	CORNER SONTH OF DRUM AREA A	0.027
14	MULTI-RAE		20.7
٢,	i	VOC= 0.0 CO= 0.0 LEL=0.0 H2	
1205	SIBATA	EAST OF DRUM AREA B	0.026
L(	MULTI-RAE	" " OXY =	20.8
4		VOC= 0.0 CO= 0.0 LEL= 0.0 Hos	
12/0	SIBATA	DRUM PAD	0.027
	MULTI- CAE	2, c(	20.8
		VOC = 0.0 CO = 0.0 LEC = 0.0 Hot	= 0.0
1215	5:BATA	NORTH WEST CORNER (UPLINO)	0,026
	Mult: RAK	11044=	
	e( 7f	VOC= 0.0 CO=0.0 LEL=0.0 Hos=	<u>= 0,0 ·                                     </u>
:			
,			······································
			-
		BATA DUST READINGS ARE MOST	<u>n</u> 3
HW: HBALTH/CORP/	A A A A A A A A A A A A A A A A A A A	MILT: RAE READINGS ARE PPI	

i			
DATE:	8/3/00	THURSDAY	
TIME	INSTRUMENT		READING
нδ	FARLY RE	ABINES - DUE TO RAIN	
11 30	3	CORNER SOUTH OF DRUM AREA A	027=51
	Sisana Gire	VOC = 0.0 CO = 0.0 LEL = 0.0 Has	0,0
<u> </u>	JIBATA	CORNER SOUTH OF DRUMAREA A	0,020
1140	SIBATA	EAST OF DRUM AREA B	0.023
"	MULTI-RAE	L1 0X	Y= 21.0
~	4.	VOC = 0.0 CO= 0.0 LEL=0.0 H	J = 0, C
1145	SIBATA	DRUM PAD	0.026
٠, (	MULTI-RAE	1, 0,44	<u>= 20.8</u>
. 1,		NOC = 0.0 CU = 0.0 LEL = 0.0 Ho	5-0.0
50	5'BATA	MORTH WEST CORNER (UPLIND)	0,026
4	MuttRAE	11 04	<u> </u>
1.	14 64	VOC = 0,0 CO = 0,0 LEL = 0,0 H	25:0,0
1315	SIBATA	CORNER SOUTH OF DRUM AREA A	0,028
1.1	MULTI-RAE	· · · · · · · · · · · · · · · · · · ·	= 20.8
٠(	le e	VOC= 0.0 CD = 0.0 LEL = 0.0 H25	6.0
1320	SIGATA	EAST OF DRUM AREA B	0.027
4 (	MULTI-RAC	<b>.</b>	= 21.0
41	1,	VOC= 0.0 CO = 0.0 (EL= 0.0 Had	` = 0,0
1325	J', BATA	DRum PAD	0.026
	MULTI-RAE	oxy!	<u> </u>
	11	VOC = 0.0 CO = 0.0 LEL = 0.0 Hal	P= 0.0
ر3 عن	SIBATA	NORTH WEST CURNER (UPLIND)	0.026
l (	Mult: RAE	11 000	: 21.0
	The state of the s	100=0.0 C0=0.0 LEL=0.0 Has=	0.0
HACHBALTHICORP	TORMS DAILFIEL		

	A 20 THE RESIDENCE OF THE PARTY		
DATE: 8	14/00	D.C. Leisina	
TIME	INSTRUMENT	LOCATION	READING
0730	SIBATA	CORNER SOUTH WEST OF DEYM AREA A	0,0214
**.	MUET: RAE		7=20.8 m
1		VOC= 0.0 PPM LEL= 0.0 PPM CO= 0.0 PPM H	
0735	5.BATA	SONTH WEST OF DRUN AREA B O.	020 mg/m
4(	MULTI-RAE		= 20.8 pf+
6,		NOC = 0.0 PPM LEL = 0.0 PPM CO = 0.0 PPM Ho	· · · · · · · · · · · · · · · · · · ·
0740	SIBATA		019 my/m3
	Multi.RAE		21.0 per
	*1	VOC = 0.0 PPM LEL = 0.0 PPM CO = 0.0 PPM Has=	
0745	SIBATA	HORTHLEST SIDE (4 AWAYD) O.	- W
43	MULT: - RAE		20 A CPA
t.		VOC= 0.0 PPM LEL= 0.0 PPM CU= 0.0 PPM Hot	
			· (V)
1540	SIBATA	CORNER SOUTH WEST OF DRUM AREA A	0.020mol.
4,	Mucri-RAE	1, 444	20.9 PM
# h		VOC = 0.0800 LEL = 0.000 CO = 0.0800 Hb S = 0.0	) CPM
1545	SIBATA	SOUTH WEST OF DRYM AREA B	0.023mg
//	Multi-RAC		20.9 PM
4		VOC=0.0 ppm LEL = 0.0 pm e 0=0.0 pm H25=00	
1555	S. BATA		018 ms/r
	Muiti-RAK		21.0 pm
11		UDC = 0.0 PPA LEL = 0.0 PPACO = OD PAM H25=	0.08h
1600  -	SIBATA		0.017 ms/h3
	MUCTI-RAE		20.9 FFM
• 1		VOC=0.0 PPM LEL=0.0 PPMCD = 0.0 PPM HasE	0.0 PPM
DEHEALTH/CORPIT	ORMSDAILFIEL		

DATE: 7	317100			
TIME	INSTRUMENT	LOCATION		READING
0804	Sibafa	South end of drum avea	В	0.034
0805	Mast Rac	- 14	v∝	
		l (	· VEL	0%
		U	Hos	Oppm
			0,2	20.9 4
0832	Sibafa			0.028
0842	Multi Rac		100	0
			LEL	
			H25	0
				20.9
7914	Sibafa Mullikae			0.029
	Mu 16 Rac		Voc	6
			H&S	8
			O <sub>B</sub> _	21.6
			LEL	٥
11/0	Si'bata			0.078
	Multi fac		VOC	6
			EEC	6
			Has	0
			٥-	26.9
1335	Sibata MultiRae			0.037
	Multi Kae		VOC	Č.
	CATCHER CO. CO. CO. CO. CO. CO. CO. CO. CO. CO.		LEV	0
0.5	CONTRACTOR OF THE PROPERTY OF		Has	0
CHEALTH/CORPATO	PANTA IL EIE		0 =	21-02

DATE: 8	17100.		
TIME	INSTRUMENT	LOCATION	READING
1423	Sibata		0.033 mg/
	Multi Rue	Voc	0.00
		ia	0.00
		47.5	0 ppm
	AMMADE DE LA CONTRACTION DEL CONTRACTION DE LA CONTRACTION DE LA CONTRACTION DE LA CONTRACTION DE LA CONTRACTION DE LA CONTRACTION DE LA CONTRACTION DE LA CONTRACTION DE LA CONTRACTION DE LA CONTRACTION DE LA CONTRACTION DE LA CONTRACTION DE LA CONTRACTION DE LA CONTRACTION DE LA C	05	121.2
513			P. 035
		Voc	6.033 6.0pp
	Company of the Colonia of the Coloni	LCL	0%
		475	O ppm
			21.0
551	S. br. Ar		8.029
	Sibrata Mut, Rave		
		Voc CEC	0.00m
		His	
			Oppre 01 102
	***		21.19%
X			
			(
			i
			AND THE RESIDENCE OF THE PARTY
	orms/dailfil'i		

DATE:	817100			
TIME	INSTRUMENT	LOCATION		READING
<b>E</b>				
1300	Sibaba	Outside d'un area	B East	0.036
	Multi Rac	и	i vac	6 ppm
		11	11 152	1
			11 HBS	OFF
			4 02	26.9 06
1363	Sibator		. 41	
	Multi Rue	L1	Worth	0.037°m
			Vac	<u>0</u>
-			LEL	0
To a second seco			H25	0
			0,2	<u>O</u>
1306	Sibata	11	South &	6.539
M <sub>erocano</sub> — — — — — — — — — — — — — — — — — — —	Multilone		VX	δ
			CO_	
			Has	5
			0>	20.9
1309	Sibata Multi Rae	<i>l</i> /	West	0.034
	Multi Pac		VDC	
			vel	<b>8</b>
-			Has	<u> </u>
	MACEUMEN 2000 Maceum ann ann an Aire ann an Aire ann an Aire ann an Aire ann an Aire ann an Aire ann an Aire an			20.9
				, <u> </u>

HM:HEALTH/CORPITORMS/DAILFIEL

TIME	INSTRUMENT	LOCATION			READ
1400	Solaita	Outside dran area B	East		
	Mutto Lac	la dino di dina di la		UDC	0.0.
			*		ĺ
				Hass	0
				<i>O</i>	20,
1404	Sibata		North		0.0
	Multi Pac		•	UDC	İ
	·			LEC	0
			***************************************	165	0
				0,	200
407	Sibata MultiPar	THE RESIDENCE OF THE PROPERTY		·	0.03
	multika			UDC	6
**************************************				IEL	<u> </u>
<u></u>			Carrier Communication Communic	145	<u> </u>
**************************************				02	20.9
410	Sibata		West		
MAXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	Multi Rue			VOC	<u>O</u>
				250	<u></u> <u> </u>
			. AND THE PROPERTY OF THE PROP	Mas	<u> </u>
				المو	Jo. 9
***************************************	the annihilated Maghanishinah and the gages on many reported for a 200 distance of the gagestone of consideration and the gagestone of the gag		SCHOOL COMMISSION OF THE COMMI		
	Zanestination		NO management of the special section of the section		
					<u> </u>
	Approximately and the second s				

TIME	8/7/00 INSTRUMENT	LOCATION		READ
1455	Sibata	Outside deux ara B Gast		0.0
	multi Lac		US	1
	·	·	LEV	0
			M25	Ö
			0,2	20.
1459	Spate	North		0.0
	Multiko		VOC	D
THE STATE OF THE S			LEV	٥
			H2S	0
			ند٥	20.
503	5/bafa			0-03
	MultiPac		100	
			150	٥
			Has	
			Do.	20.
505	s, bafa	West		0.03
	Multi Rac		URC	0
			152	<b>D</b>
			H2S	<u> </u>
			2	20.9
	Market and control of the control of			

TIME	INSTRUMENT	LOCATION	READ
1600	Sibafa	ontside draw ara B Fast	6.6
	Multi lac	Voz	0
		LEC	10
		tl28	0
,		02	20.9
1604	Sibata	North	0-6
<del></del>	S, bata Multiloe	VOC	<u>ව-</u> ව
		LEL.	0
			D
		62	20.9
1607	Sibala	South	0.03
	Sibafa Multikve	VDC	<u>0.0</u>
		CEV	6
		Mas	0
	grant and application of the state of the st	D.	20.
610	Sibak	west	0.02
_	Multi Page	UDC .	
	The second secon	1 EU	8
		H-8	ზ
		02	20
37037	Michigan Access October 1995 and 1995 a		

DATE:	8/8/00	Backgrand Dust 0.089mg/m3	<i>-</i>	I
Time	Instrument	Location Workzone		Reading
0805.	Sibata	South side of drum storage area	B	0.037
	Multi Rae	٥	VUC	0.0 ppm
			<u>LEL</u>	06
			H <sub>2</sub> S	Оррт
			O,	20.9%
0848	Sibata	32. /·		0.07900
<del></del>	Multi Rae		<u>Voc</u>	O. Oppn
			<u>LEL</u>	0 %
			H <sub>2</sub> S	Oppa
10-20 B			<u>O</u>	211%
1029	Sibata			0.033
	Multi Rae		VOC	0.0 ppm
			LEL	0 1
			H <sub>2</sub> S	O par
	<u>.</u>		0	20.9
1335	Sibata	Center of drun sprage area B		O.02400
	Multi Rae		VOC	0.0 gg
	·	11	LEL	0%
		. •	H₂S	Doga
		£. 1	Q,	20.9%
1486	Sibata	Seiter of drum storage area B		0.041
	Multi Rae		VOC	D.Oppin
	•		LEL	D*6
			H <sub>2</sub> S	Opper
1564		4	0	_ 20.9°
	Sibata	carry of draw object are B		Ø.637
	Multi Rae		VOC	0.0 <sub>6000</sub>
. *.*			LEL	0 %
			H <sub>2</sub> S	Oppor
			O	21.0 %

offert time: gersonal pump 0736

1		DAIL LIEED MONITOKING VEGOTIO		
		DV = Downer -	<u> </u>	
DATE:	9/8/00	Perimeter Readings		
Time	Instrument	Location	Reading	ļ
1141	Sibata	Fact Pos well of dryn Storage B	0.023 mg/m	3
	Multi Rae	100	0.0gm	-
		LE LE	L 0%	
		$H_2$	S Oppn	
			20.8%	
1145	Sibata	South Permeter of Down Storage B	0.026mg/2	3
	Multi Rae	Voc	O.Oppa	
		<u>LE</u>	L 0%	
		$H_2$	SOPP	
		242 600	708%	
1148	Sibata	total Perimeter of Drum Sharange B (DW)	0.026 ms	-
	Multi Rae	Voc	0.0 ppm	
		T. LE	L 0.6	4
		$H_2$	Dan	1 1 1 1 1 1 1
<u>, , , , , , , , , , , , , , , , , , , </u>			209%	ź
1151	Sibata	North Pernetr of Drugtoge B	D.024	
<u> </u>	Multi Rae	VOC		
		· Le	-0%	. iy
		H <sub>2</sub> S	Oppr	
			20.8%	
1348	Sibata	West beriacto of from storas B	0.041 mg/m	٤
	Multi Rae	Voc	0.000n	
			-0%	
		H <sub>2</sub> S	O open	
OMORA,			21.1%	
1351	Sibata	Down word of Trup truck loading	1.082md	ر میرست
	Multi Rae	Voc	0.0	
S	·	LE	- 25/2	
***************************************		H <sub>2</sub> S	Oppm	
	<u> </u>			

Reading  Sibata  North Princh of Dum Stocage R  Authority of Dum Stocage R  Sibata  Multi Rae  North Princh of Dum Stocage R  O 21/6  H2S  O 21/6  Sibata  Multi Rae  North Minth of Dum Stocage B  LEL  North  H2S  O 21/6  H2S  O 21/6  Authority of Pan Stocage B  North Minth Rae  North Minth of Pan Stocage B  North Minth Rae  North Minth of North of Pan Stocage B  North Minth Rae  North Ramaday of North Stocage B  North Minth Rae  North Ramaday of North Stocage B  North Ramaday of North Stocage B  North Ramaday of North Stocage B  North Ramaday of North Stocage B  North Ramaday of North Stocage B  North Ramaday of North Stocage B  North Ramaday of North Stocage B  North Ramaday of North Stocage B  North Ramaday of North Stocage B  North Ramaday of North Stock Isolamy  North Stocage B  North Ramaday of North Stocage B  North Ramaday of North Stocage B  North Ramaday of North Ramaday and B  North Stocage B  North Ramaday of North Ramaday and B  North Stocage B  North Ramaday of North Ramaday and B  North Stocage B  North Ramaday of North Ramaday and B  North Stocage B  North Ramaday of North Ramaday and B  North Stocage B  North Ramaday of North Ramaday and B  North Stocage R  North Ramaday of North Ramaday and B  North Stocage R  North Ramaday of North Ramaday and B  North Ramaday of North Ramaday and B  North Ramaday of North Ramaday and B  North Ramaday of North Ramaday and B  North Ramaday and Ramaday and Ramaday and B  North Ramaday and Ramaday	DATE:	\$/8/00	Primer Roselings	in a marijana kanana kahiri <u>a ma</u> kira makabanya kamir <u>a kanana</u>
Sibata  Multi Rae  North Romako et Dim Strage R  LEL 0%  H2S Office  Multi Rae  VOC 0.0 pp  LEL 0%  H2S Office  Multi Rae  VOC 0.0 pp  LEL 0%  H2S Office  North Romako et Dim Strage 8  0 21.0  H2S Office  Multi Rae  North Romato of Rm Strage 8  Nor	Time	<del>- 17 - 7 "</del>	Location	Reading
Multi Rae  Multi Rae		Sibata		0 048
H2S Offer  356 Sibata  Multi Rae			VOC	1.000m
H2S 0 pm  O 21/9  35/6 Sibata Fast Prince of Drum Strage & aczen  Multi Rae  WOC 0.0 pm  LEL 0.2  H2S 0 pm  O 21.0 2  Multi Rae  WOC 0.0 pm  LEL 0.2  Multi Rae  WOC 0.0 pm  LEL 0.2  H2S 0 pm  O 21.1 2  Go 2 Sibata Sup Prince of Drum Strage from B CODYSM  Multi Rae  WOC 0.0 pm  LEL 0.2  H2S 0 pm  O 21.1 2  Go 2 Sibata Sup Prince of Drum Strage from B CODYSM  Multi Rae  WOC 0.0 pm  LEL 0.2  H2S 0 pm  O 21.2 2  Multi Rae  WOC 0.0 pm  LEL 0.2  Multi Rae  WOC 0.0 pm  LEL 0.2  Multi Rae  WOC 0.0 pm  D 21.1 2  Multi Rae  WOC 0.0 pm  LEL 0.6  South Perince of Six B VOC 0.0 pm  LEL 0.6  Multi Rae  WOC 0.0 pm  LEL 0.6  Multi Rae  WOC 0.0 pm  LEL 0.6  Multi Rae  WOC 0.0 pm  LEL 0.6  Multi Rae  WOC 0.0 pm  LEL 0.6  Multi Rae  WOC 0.0 pm  LEL 0.6  Multi Rae  WOC 0.0 ppm  LEL 0.6  Multi Rae	· · · · · · · · · · · · · · · · · · ·			0%
Multi Rae  Multi Rae				DOOM
Multi Rae  Multi Rae			0	21.1%
Multi Rae  LEL 0°/  H <sub>2</sub> S 0,000  359 Sibata South British of Prin storage B 0.015 mg  Multi Rae  NOC 0.000  LEL 0°/  H <sub>2</sub> S 0,000  NUITI Rae  NOC 0.000  LEL 0°/  H <sub>2</sub> S 0,000  NUITI Rae  VOC 0.000  LEL 0°/  H <sub>2</sub> S 0,000  NUITI Rae  VOC 0.000  NUITI Rae  VOC 0.000  LEL 0°/  H <sub>2</sub> S 0,000  NUITI Rae  VOC 0.000  LEL 0°/  H <sub>2</sub> S 0,000  NUITI Rae  VOC 0.000  NUITI Rae  VOC 0.000  NUITI Rae  VOC 0.000  NUITI Rae  VOC 0.000  NUITI Rae  VOC 0.000  NUITI Rae  VOC 0.000  NUITI Rae  NUITI Rae  VOC 0.000  NUITI Rae  NUITI Rae  VOC 0.0000  NUITI Rae  NUITI Rae  VOC 0.0000  NUITI Rae  NUITI Rae  VOC 0.0000  NUITI Rae  NUITI Rae  VOC 0.00000  NUITI Rae	1356	Sib <b>a</b> ta	East Pointer of Drum Strange &	0.026
H2S Open O 21.0% Sibata Forth British of Prin Storage B 0.065 mg Multi Rae VOC 6.0 pan H2S Oppon O 21.1% Go 2 Sibata Sorth Principal of Drin Storage Area B 0.025 mg Multi Rae VOC 00 pan LEL 0% H2S Oppon O 21.2% H2S Oppon O 21.2% Multi Rae Earl Principal of ding truck loading 10.195 mg Multi Rae Earl Principal of Six B VOC 0.0 pan LEL 0 % Sibata Sorth Principal of ding truck loading 10.195 mg Multi Rae Sorth Principal of ding truck loading 10.25 mg Multi Rae VOC 0.0 pan LEL 0 % Multi Rae Door Principal of ding truck loading 10.025 mg Multi Rae Door Principal	Y	Multi Rae	VOC	0.0 ppm
Sibata  South Private of Prin storage B  O 21.02  Multi Rae  VOC 0.02000  LEL 0%  H <sub>2</sub> S Opin To O.25500  Multi Rae  VOC 00 ppin  LEL 0%  H <sub>2</sub> S Oppn  O 21.12  So V Sibata  Domining of damp truck localing to 195 mg  Multi Rae  Ent per mark of 514 B  VOC 00 ppin  LEL 0%  LEL 0%  Sibata  South Permits of damp truck localing to 195 mg  LEL 0%  Sibata  South Permits of damp truck localing to 195 mg  Multi Rae  VOC 0.02000  LEL 0%  LEL 0%  Multi Rae  VOC 0.025000  LEL 0%  LEL 0%  Multi Rae  VOC 0.025000  LEL 0%  LEL 0%  Multi Rae  VOC 0.025000  LEL 0%  LEL 0%  Multi Rae  VOC 0.025000  Multi Rae  VOC 0.025000  Multi Rae			LEL LEL	00/0
Multi Rae  South Principle of P			H <sub>2</sub> S	Oppor
Multi Rae  Multi Rae				21.0%
Multi Rae    Multi Rae	1359		South Deliveter of Para Starge B	0.015 mg/
H2S Opport  O 71.1%  O 2 Sibata South Permeter of From Horage them to 1 0.025%  Multi Rae  VOC 00 pm  LEL 0%  H2S Opport  O 21.2%  Multi Rae  East per more of 5.14 B VOC 0.09m  LEL 0%  Frank Rending for dust 0.053myla 3 H2S Opport  Multi Rae  Multi Rae  Multi Rae  VOC 0.09m  LEL 0%  Frank Rending for dust 0.053myla 3 H2S Opport  Multi Rae  NOC 0.09m  LEL 0%  H2S 0 port		Multi Rae	/ VOC	8.0 pp
Sibata Sort Pervetor of Drim Grange Anna B CODISTA  Multi Rae  VOC 00 ppm  LEL 07.  H <sub>2</sub> S Oppm  O 21.2%  Multi Rae  Ent per metri of Six B VOC 0.0 pm  LEL 0"/  LEL 0"/  Multi Rae  Frank Perling for Just 0.053 my/a" H <sub>2</sub> S Oppm  O 21.1°/  Multi Rae  Multi Rae  H <sub>2</sub> S Oppm  O 21.1°/  Multi Rae  LEL 0"/  H <sub>2</sub> S Oppm  LEL 0"/  Multi Rae  NOC 0.0 ppm  LEL 0"/  LEL 0"/  Multi Rae  NOC 0.0 ppm  LEL 0"/  Multi Rae  NOC 0.0 ppm  LEL 0"/  Multi Rae  NOC 0.0 ppm  LEL 0"/  Multi Rae	-		) JEL	0%
Multi Rae    Multi Rae   LEL 07.   H2S Open   O 21.2%   Multi Rae   Early per metry of 5126 B VOC 0.0 pm			H <sub>2</sub> S	Open X
Multi Rae    Multi Rae   LEL 07.   H2S Open   O 21.2%   Multi Rae   Early per metry of 5126 B VOC 0.0 pm			O	71.1%
Multi Rae    Multi Rae   LEL 07.   H2S Open   O 21.2%   Multi Rae   Early per metry of 5126 B VOC 0.0 pm	502		South Permeter of Drum Strange since B	0025
H2S Oppon  O 21-2%  So V Sibata Domining of dump truck loading #0.195 mg.  Multi Rae East per more of 512 B VOC 0.0 pm  LEL 0 1/6  Floored Rending for dust 0.053 mg/m³ H2S Oppon  On 2110/6  Sibata Sort Permite of dear stronge were B 0.025 mg  Multi Rae  NOC 0.0 ppm  LEL 0 1/6  H2S 0 ppm		Multi Rae	VOC	Do ppm
Solv Sibata Dominal of dump truck loading 40.195 mg.  Multi Rae Earl per metry of 512.8 VOC 0.0 pm  LEL 0 1/2  Solv Sibata South Renders for dust 0.053 mg/m <sup>3</sup> H <sub>2</sub> S 0 gm  On 211°/2  Multi Rae VOC 0.0 pm  Multi Rae VOC 0.0 pm  h LEL 0'2  H <sub>2</sub> S 0 ppm			LEU LEU	0%
Multi Rae  Solv Sibata  Multi Rae  Solv per metro of 5,16.8  Solv Floored Rending for dust 0.033 my/m³ H2S  On 21,1%  Multi Rae			H <sub>2</sub> S	Oppn
Multi Rae  East per meter of SIL B  LEL 0 %  So &   * Swand Reading for dust 0.033 my/m³ H2S 0 gran  On 211%  Sibata South Permeder of drum starge with B 0.025 my  Multi Rae  N  LEL 0%  H2S 0 porm			O <sub>4</sub>	21.2%
LEL 0 %  508  * Grand Rending for dust 0.033 my/m³ H2S 0 gran  On 2110%  Sibata South Perioder of drum stronge arch B 0.025 my  Multi Rae  VOC 0.0 gran  H2S 0 prom	90 U			2.195034
SOS # Grand Rending for dust 0.033myla 3 H2S Open  O2 21.1%  Sibata South Perioder of drum stronge with B 0.025my  Multi Rae VOC 0.00000000000000000000000000000000000		Multi Rae		0.0 pm
Sibata Sour Poincle of drum stronge with B 0.025 mg  Multi Rae  VOC 0.0000  H2S 0 pom				0 %
Sibata South Portucity of dryn stronge with B D. DESmy Multi Rae  N LEL D'A  H2S D prom	<u> 508 - </u>			Og-
Multi Rae VOC Ordan LEL 0°2 H <sub>2</sub> S 0 por	,	C:14-		0.00.00.00.00.00.00.00.00.00.00.00.00.0
H <sub>2</sub> S 0 pom	<u>5 ) i</u>		South to well of deen stronge with to	
H2S 0 pom	- HOWELP CONTRACTOR	IMUII Kae	E Bank E	Coppos
				- <u>- 2                                 </u>
			0	24,1%

DATE:	4/3/00	Permater Realings	
Time	Instrument	Location	Reading
513	Sibata	west primeter of dru storage area 8	0.024
	Multi Rae	VOC	
		LEL	0 %
· · · · · · · · · · · · · · · · · · ·		H <sub>2</sub> S	
		0	21.2 %
1602	Sibata	west permeter of drum storage break	O.DZUE
	Multi Rae	Voc	0.0 pm
		LEL LEL	0%
		H <sub>2</sub> S	Oppen
		0	z 21.1 %
1605	Sibata	South Permeter of Arm Storage area &	10.025A
	Multi Rae	VOC	0.0ppm
		LEL	0%
		H <sub>2</sub> S	Oppn
		O <sub>2</sub>	20.9
1610	Sibata	Egst of scrop med looker	0045
	Multi Rae	Dominal of storage area & VOC	0.0 pm
		. LEL	. 6%
		H <sub>2</sub> S	Oppon
		0	2500%
1415	Sibata	North Permeter of storage area B	0.024 pg/
	Multi Rae	VOC	0.2000
		LEL	0%
		H₂S	Oppor
		O	V2111%
	Sibata		
	Multi Rae	VOC	
		L For Luc	
**************************************		H <sub>2</sub> S	
**************************************	ĺ	O	

		Sensitivity 50	72.V
DATE:	8/9/00	Background dust 0.012mg/	بر 3
Time	Instrument	Location Work zone	Reading
0821	Sibata	WZ of drum Storage area B	0.027
	Multi Rae	VOC	0.0 ppm
		Lance Base Base	0 %
		H <sub>2</sub> S	Oppm
		0.	20.9%
0904	Sibata	Center of drum storage area R	0.083 m
	Multi Rae	VOC	0.0 ppm
		LEL	0 %
		H <sub>2</sub> S	0 ppm
		Q	
1021	Sibata	We center of drum storage area B	0.022 mg/
	Multi Rae	VOC	0.0 ppm
		LEL	0%
,		. H <sub>2</sub> S	0 ppm
		O.	
1331	Sibata	WZ South side of drum storage on B.	0-031 mg/
	Multi Rae	VOC	0.0 ppm
		LEL .	0 %
		H <sub>2</sub> S	O ppm
<u>-</u>		O	
/337	Sibata		0.088ms/
	Multi Rae	Voc	0.0 ppm
		LEL	0 %
		H <sub>2</sub> S	0 m
······································			20.9 %
1524	Sibata		0.031 mg/m
	Multi Rae	VOC	D.O pom
		LEL	O %
		H <sub>2</sub> S	5 ppr-
***************************************		O	21.0%

DATE:	8/9/00			
Time	Instrument	Location, Permeter	Read	ing
1000	Sibata	West Permeter of drum Storage seen	800	24m
	Multi Rae	yoc voc		ppm
		<u>LEL</u>	D	6/6
		H <sub>2</sub> S	0	ppn
		0	, 20.8	16%
1004	Sibata	South Perimeter	0.02	5 Mg/
	Multi Rae	VOC	0.0	
	·	LEL.	0	٠/٠
		H <sub>2</sub> S	0 #	pr
		0.	20.9	%
1008	Sibata	East Perimeter	0.08	3 1951
	Multi Rae	. VOC	مره	maker ).
ol		Leading to the second s	o ×	%
	:	Į į į į į į į į į į į į į į į į į į į į	0 1	p.m.
		- <b>(C)</b>	20.9	. %
1013	Sibata	North Perineter	0.05	5 /44
	Multi Rae	VOC	0.0	opm
		LF-L	0	16
		H₂S	· O ,	20an
		Q	21.0	0/0
1131	Sibata	East Perimeter of drya stylacourse R	0.047	ms/
·	Multi Rae	VOC		OP M
		LEL	0	%
		H <sub>2</sub> S	0	opm
		Q	21.1	%
1135	Sibata	South Permeter	208	المم
****	Multi Rae .		၇.၀	APM
	·	<u>LEL</u>	0	%
		H <sub>2</sub> S	0	27.00
		O	21.1	9/4
				7.43

DATE:	8/9/00			
Time	Instrument	Location		Reading
1139	Sibata	West Porincer Storage	orce B.	0.019mg
	Multi Rae		VOC	0.0 00
			<u>LEL</u>	0 %
		<u> </u>	.H₂S	o Am
			· O	20.9 %
508	Sibata	Norta Perinele		0.0254-
	Multi Ra <b>e</b>		VOC	o.oppm
			. LEL	0 %
			· H <sub>2</sub> S	o you
			0	20.9%
ヴル	Sibata	West Permeter	•	0.021 mg
	Multi Rae		· VOC	2.000
			: LEL	5 7/3
			H₂S	3
<u></u>			· · · · · · · · · · · · · · · · · · ·	20. 7 %
515	Sibata	Sorm Perinete		0.820 2.
	Multi Rae		VOC	0.0 9%
			LEL	0 %
			. H₂S	o Am
			O	20.9 %
517	Sibata	East Perpeter		2029 m
	Multi Rae		VOC	0.0 17
-			LEL	0%
			H₂S	o Apr
			0	70.9%
	Sibata			7
	Multi Rae		VOC	يريا.
			. LEL	
			• • H <sub>2</sub> S	0 99-

DATE: 8	3/10/00		
Time	Instrument	Location ,	Reading
0938	Sibata	WZ of 501/ Sampling in drum storage	0.016 mg/
	Multi Rae	area B VOC	0.0 00
		LEL	0%
	<i></i>	H <sub>2</sub> S	O pagara
			70.90%
1102	Sibata	WZ of Soil sappling in aloum storage	0.01 Carrie
	Multi Rae	area B VOC	.0.0 gar
		LEL	0 %
		$H_2S$	O gore
		43 Q	21.1.%
1145	Sibata	we of soil sampling in drum storage	0-014 page
1	Multi Rae	are = B VOC	8.0 pp
	-	i i i i i i i i i i i i i i i i i i i	0 %
•		H <sub>2</sub> S	O A
		**O	10-9 %
	Sibata		
	Multi Rae	Ext Exit Drom area B VOC	`
		A 1400 LEL	***
		H <sub>2</sub> \$	
		0	
	Sibata		
·	Multi Rae	VOC	
		LEL	
		H <sub>2</sub> S	
		O	
	Sibata		**, - , , , , , , , , , , , , , , , , , ,
	Multi Rae .	VOC	
	·	LFL	
		H <sub>2</sub> S	* ·**
		Ö	

DATE: Time	8//5/00  Instrument	Location WZ - f - A - A	a. L	Reading
	Sibata	NW acres of drum Area A	Graverin.	1
08741	Multi Rae	TOW COENCY OF OTUM THEA H	VOC	0.006 reg/m
· · · · · · · · · · · · · · · · · · ·	Tyranti 1 tao		LEL	- F-7-C-1
	-		H <sub>2</sub> S	
			<u> </u>	
	Sibata		Q	
0911	Multi Rae	Nw corner of drum treat	VOC	0.005mg/m
	Multilitae		LEL	0.0 pm
			H <sub>2</sub> S	
د د	Sibata		<u>O</u>	_
1051	Multi Rae	NW corner of drum Area A		0.005mg/m
**************************************	India IVae	77.00 /07.00	VOC LEL	O.O pom
······································			· · · · · · · · · · · · · · · · · · ·	0%
			H <sub>2</sub> S	
	Sibata		<u> </u>	
1321	Multi Rae	West corner of draw tree &	voc	0.003 mg/23
	INGILI I CAC			0.0 ppm
**************************************			H <sub>2</sub> S	Oppm
	Sibata		<u> </u>	74.0.4
441	Multi Rae	center of drum Area A		2.002000
	IVIUIU Nae		VOC	0.0 ppm
				)%
·				Oppon
			<u>Q</u>	21.1%
32	Sibata	center of from Area A		0.005 md m
······································	Multi Rae .		VOC	0.0 pp
·····			LEL	0 %
TOKA MANAGAMI MANAGAMI MANAGAMI MANAGAMI MANAGAMI MANAGAMI MANAGAMI MANAGAMI MANAGAMI MANAGAMI MANAGAMI MANAGAM			H <sub>2</sub> S	0 000
Oliver - Market Market Market Company			<u> </u>	71.0%

DATE:	7/	geltime dust manitaring in workzune	
Time	<u> </u>	Location	Reading
0743	Sibata	Center of drum Area A	0.002Mg/n
	Multi Rae	VOC	
		<u>LEL</u>	
		$H_2S$	
		O	
083 <u>5</u>	Sibata	conte of draw Area A	0.003mg/
	Multi Rae	Voc	
		LEL	
		H <sub>2</sub> S	
		0	
<i>7951</i>	Sibata	center of drom Area A	2005mg/2
	Multi Rae	VOC	
		LEL	
		H <sub>2</sub> S	
		O	
/ひろ	Sibata		0.005 ms/
	Multi Rae	VOC	
		LEL	
		H <sub>2</sub> S	Marketine (control of the control of
		0	**************************************
	Sibata		
	Multi Rae	Voc	
		LEL	
		H <sub>2</sub> S	
		0	
	Sibata		
	Multi Rae .	VOC	
		LEL	
· · · · · · · · · · · · · · · · · · ·		H <sub>2</sub> S	
***************************************		0	

Instrument: Multi-gas Monitor (PGM50-5P)

User ID: AHIBBARD

Site ID:

Serial Number: 504754

Data Points: 22

Data Type: Avg

Sample Period: 600 sec

Last Calibration Time: 08/17/2000 07:05

Gas Type:

CO(ppm) VOC(ppm) H2S(ppm) LEL(%)

High Alarm Levels:

**,2**0.**0** 200.0 100.0

20.0 23.5

Low Alarm Levels:

35.0 50.0 10.0 10.0 19.5

Line#	Date Time	CO(ppm) VOC(	ppm) H2S(ppm)	LEL(%)	OXY(%)
			. <del> </del>		10 mgs 400 mgs 100 mgs 100 mgs 100 mgs 100 mgs 100 mgs 100 mgs 100 mgs 100 mgs 100 mgs 100 mgs 100 mgs 100 mgs 

1	08/17/2000 07:44	0.0	0.0	<b>0</b> .0	0.0	20.9	
2	08/17/2000 07:54	0.0	0.0	0.0	0.0	21.0	
3	08/17/2000 08:04	<b>0</b> .0	0.0	0.0	0.0	21.1	
4	08/17/2000 08:14	0.0	0.0	0.0	0.0	21.1	
5	08/17/2000 08:24	0.0	0.0	0.0	0.0	21.2	
6	08/17/2000 08:34	0.0	0.0	0.0	0.0	21.2	
7	08/17/2000 08:44	0.0	<b>0</b> .0	0.0	0.0	21.2	
8	08/17/2000 08:54	0.0	0.0	0.0	0.0	21.2	
9	08/17/2000 09:04	0.0	0.0	0.0	0.0	21.2	
10	08/17/2000 09:14	0.0	0.0	0.0	0.0	21.2	
11	08/17/2000 09:24	0.0	0.0	0.0	0.0	21.3	
12	08/17/2000 09:34	0.0	0.0	0.0	0.0	21.2	
13	08/17/2000 09:44	0.0	0.0	0.0	0.0	21.3	
14	08/17/2000 09:54	0.0	0.0	0.0	0.0	21.3	
15	08/17/2000 10:04	0.0	0.0	0.0	0.0	21.3	
16	08/17/2000 10:14	0.0	0.0	0.0	0.0	21.3	
17	08/17/2000 10:24	0.0	0.0	0.0	0.0	21.3	
18	08/17/2000 10:34	0.0	0.0	0.0	0.0	21.2	
19	08/17/2000 10:44	0.0	0.0	0.0	0.0	21.2	
20	08/17/2000 10:54	0.0	0.0	0.0	0.0	21.3	
21	08/17/2000 11:04	0.0	0.0	0.0	0.0	21.4	
22	08/17/2000 11:14	0.0	0.0	0.0	0.0	21.4	

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754

User ID: AHIBBARD

Site ID: E672

Data Points: 22 Data Type: Avg Sample Period: 600 sec

Last Calibration Time: 08/17/2000 07:05

Start At: 08/17/2000 07:44 End At: 08/17/2000 11:14

Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

200.0 100.0 20.0 **2**0.0 23.5 High Alarm Levels: Low Alarm Levels: 10.0 35.0 50.0 10.0 19.5 100.0 STEL Alarm Levels: 25.0 15.0 TWA Alarm Levels: 35.0 10.0 10.0

Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

Peak Data Value: 0.0 0.0 21.4 0.0 0.0 Min Data Value: 0.0 0.0 0.0 0.0 20.9 0.0 TWA Data Value: 0.0 0.0 AVG Data Value: 0.0 0.0 0.0

Instrument: Muln-gas Monitor (PGM50-5P) Serial Number: J04754 User ID: AHIBBARD Site ID: Data Points: 17 Data Type: Avg Sample Period: 600 sad Last Calibration Time: 08/22/2000 07:04 Gas Type: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)High Alarm Levels: 200.0 100.0 20.0 20.0 35.0 Low Alarm Levels: 50.0 10.0 10.0 19.5 CO(ppm) VOC(ppm) H2S(ppm) LEL(%) Line# Date Time OXY(%)1 08/22/2000 07:42 0.2 0.0 0.0 0.0 20.8 2 08/22/2000 07:52 0.4 0.0 0,0 0.0 20.8 3 08/22/2000 08:02 0.6 0.0  $0.0^{\circ}$ 0.0 20.9 4 08/22/2000 08:12 8.0 0.0 0.0 0.1 21.0 5 08/22/2000 08:22 0.9 0.0 0.0 0.121.0 6 08/22/2000 08:32 1.1 0.0 0.0 0.2 21.1 7 08/22/2000 08:42 1.3 0.0 0.0 0.2 21.1 8 08/22/2000 08:52 1.5 0.0 0.0 0.3 21.1 9 08/22/2000 09:02 1.8 0.0 0.0 0.4 21.1 10 08/22/2000 09:12 2.1 0.0 0.0 0.5 21.2 11 08/22/2000 09:22 2.4 0.0 0.0 0.5 21.3 12 08/22/2000 09:32 2.6 0.0 0.0 0.4 21.4 13 08/22/2000 09:42 2.6 0.0 0.0 0.4 21.4 14 08/22/2000 09:52 2.5 0.0 0.3 0.0 21.4 15 08/22/2000 10:02 2.5 0.0 0.0 0.4 21.4 16 08/22/2000 10:12 2.6 0.00.0 0.4 21.4 17 08/22/2000 10:22 2.4 0:0 0.0 0.4 21.5

Work Zone Drum Area A

Instrument: Multi-gas Monitor (FGM50-5P)

Site ID: E672

Serial Number: 504754

User ID: AHIBBARD Data Points: 37

Data Typo: Avg

Sample Period: 600 sec

Last Calibration Time: 08/22/2000 07:04

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Gas Type: High Alarm Levels: 200.0 100.0 20.0 20.0 23.5 35.0 10.0 50.0 10.0 Low Alarm Levels: 19.5 Date Time CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Line# 1 **0**8/22/2000 10:38 0.2 0.0 0.0 0.0 20.8 2 **0**8/22/2000 10:48 0.6 0.8 0.0 0.120.8 3 **0**8/22/2000 10:58 1.0 0.1 0.0 **0**.1 20.9 4 **0**8/22/2000 11:08 1.4 0.7 0.0 0.2 20.9 5 08/22/2000 11:18 1.4 0.3 0.0 0.3 21.0 **6 0**8/22/2**0**00 11:28 1.3 0.4 0.0 0.3 21.0 7 08/22/2000 11:38 1.3 0.3 0.0 0.3 21.0 8 08/22/2000 11:48 21.0 1.4 0.0 0.3 0.0 9 08/22/2000 11:58 2.0 0.0 0.0 0.4 **20**.9 10 08/22/2000 12:08 2.4 0.0 0.0 0.4 20.9 11 08/22/2000 12:18 2.6 0.0 0.0 0.4 20.9 12 08/22/2000 12:28 2.7 0.0 0.0 0.4 20.9 13 08/22/2000 12:38 2.8 0.0 0.0 0.5 20.9 14 08/22/2000 12:48 2.5 0.0 0.0 0.3 21.0 15 08/22/2000 12:58 1.8 0.0 0.0 0.2 21.1 16 08/22/2000 13:08 1.7 0.0 0.0 0.4 21.0 17 08/22/2000 13:18 1.7 0.0 0.0 0.4 21.0 18 08/22/2000 13:28 1.4 0.1 0.0 0.3 21.0 19 08/22/2000 13:38 1.0 0.0 0.0 0.1 21.0 20 08/22/2000 13:48 0.6 0.0 0.0 0.2 21.0 21 08/22/2000 13:58 0.3 0.0 0.0 0.1 21.1 22 08/22/2000 14:08 0.1 0.0 0.0 0.0 21.1 23 08/22/2000 14:18 0.0 0.0 0.0 0.1 21.0 24 08/22/2000 14:28 0.0 0.0 0.0 0.1 . 21.0 25 08/22/2000 14:38 0.0 0.0 0.0 0.1 21.0 26 08/22/2000 14:48 0.0 0.0 0.0 0.0 21.0 27 08/22/2000 14:58 0.0 0.0 0.0 0.0 21.0 28 08/22/2000 15:08 0.0 0.0 0.0 0.0 21.0 29 08/22/2000 15:18 0.0 0.0 21.0 0.0 0.0 30 08/22/2000 15:28 0.0 0.0 0.0 0.0 21.0 31 08/22/2000 15:38 0.0 0.0 0.0 0.1 20.9 Work-zone Drum Aren A 32 08/22/2000 15:48 0.0 0.1 0.1 0.0 20.9 33 08/22/2000 15:58 0.0 0.3 0.0 0.1 21.0 34 08/22/2000 16:08 0.0 0.0 0.0 0.1 21.0 35 08/22/2000 16:18 0.0 0.0 0.0 0.1 20.9 36 08/22/2000 16:28 0.0 0.0 0.0 0.1 21.0 37 08/22/2000 16:38 0.0 0.0 0.0 0.2 21.0

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number 504754 User ID: AHIBBARD Site ID: E672 Data Points: 37 Data Type: Avg Sample Period: 600 sec Last Calibration Time: 08/22/2000 07:04 Start At: 08/22/2000 10:38 End At: 08/22/2000 16:38 CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Sensor: High Alarm Levels: 200.0 100.0 20.0 20.0 23.5 10.0 10.0 19.5 35.0 50.0 Low Alarm Levels: 100.0 25.0 STEL Alarm Levels: 35.0 10.0 TWA Alarm Levels: 10.0 

AVG Data Value: 0.9 0.1 0.0 -----

21.1

20.8

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

0.0

0.0

0.5

0.0

....

0.8 0.0

0.0

0.1

2.8

0.0

0.7

Sensor:

Peak Data Value:

Min Data Value:

TWA Data Value:

Work one Drin Area A

-instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754 User ID: AHIBBARD Site ID: E672 Data Points: 17 Data Type: Avg Sample Period: 600 sec Last Calibration Time: 08/22/2000 07:04 Start At: 08/22/2000 07:42 End At: 08/22/2000 10:22 CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Sensor: 20.0 23.5 High Alarm Levels: 200.0 100.0 20.0 Low Alarm Levels: 35.0 **50**.0 10.0 10.0 19.5 STEL Alarm Levels: 100.0 25.0 15.0 .... TWA Alarm Levels: 35.0 10.0 10.0 Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Peak Data Value: 2.6 0.0 0.0 0.5 21.5 Min Data Value: 0.2 0.0 0.0 0.0 20.8 TWA Data Value: 0.6 0.0 0.0 AVG Data Value: 1.7 0.0 0.0 -----

Work zone Drum Aren A

DATE:	8/22/00		eryk <u>en er en gyddol a gantar gan y gantar y gantar y gantar y gantar y gantar y gantar y gantar y gantar y ga</u>	
Time	Instrument	Location lipst zone monit		Reading
0801	Sibata	SE corne of from	J	0.021 mg
	Multi Rae	Area (DW)	VOC	J
		Dret	<u>LEL</u>	
	·		H <sub>2</sub> S	
			0	
0521	Sibata	\(\)	<u>.</u>	
	Multi Rae	Dust	_ <del>Voc</del>	0.032mg/2
			<u>LEL</u>	
			H <sub>2</sub> S	
			:0	
1103	Sibata	, ,		0.085 1/5
······································	Multi Rae		VOC	
		Dust	LEL SALEL	
			H <sub>2</sub> S	
			<b>20</b> 素 <b>0</b>	- 10 Act
1344	Sibata	\\\		0.038mg
	Multi Rae		VOC	
			LEL	
		Dust	H <sub>2</sub> S	
			0	
1535	Sibata	\\		D. 007005/23
	Multi Rae		VOC	
·			<u>LEL</u>	
			H <sub>2</sub> S	
			0	
CHILL THOMSON CONTROL TO THE TAXABLE PROPERTY.	Sibata			E1
	Multi Rae .		voc	
TMON.			LEL	
			H <sub>2</sub> S	
			0	1

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754 User ID: AHIBBARD Site ID: E672 Data Points: 54 Data Type: Avg Sample Period: 600 sec Last Calibration Time: 08/23/2000 07:58 Start At: 08/23/2000 08:29 End At: 08/23/2000 17:19 Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) High Alarm Levels: 200.0 100.0 20.0 20.0 23.5 Low Alarm Levels: 35.0 50.0 10.0 • 10.0 19.5 STEL Alarm Levels: 100.0 25.0 15.0 .... TWA Alarm Levels: 35.0 10.0 10.0 Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Peak Data Value: 1.1 0.0 0.1 21.3 0.0

21.0

Work zone Drun Aren A

Min Data Value:

TWA Data Value:

AVG Data Value:

0.1

0.6

0.5

0.0

0.0

0.0

0.0

0.0

0.0

0.0

Instrument: Multi-gas Monitor (PGM50-5P)
User ID: AHIBBARD Site ID: E672
Data Points: 54 Data Type: Avg

46 08/23/2000 15:59

47 08/23/2000 16:09

0.2

0.1

0.0

0.0

0.0

0.0

Serial Number: 504754

Data Points: 54

Sample Period: 600 sec

Last Calibration Time: (	08/23/2 <b>0</b> 0 ======	0 07: <b>5</b> 8		·		
= Gas Type: C	O(ppm) V	OC(nnm)	H25/n	ון (תור	F1 (%) C	7XY/%)
High Alarm Levels:	200.0	100.0	<b>20</b> .0	20. <b>0</b>		
Low Alarm Levels:	35.0	<b>5</b> 0.0	10.0	10.0	19.5	
= Line# Date Time	CO(ppm)	VOC(pp	m) H <b>2</b> S	(maa)	LEL(%)	OXY(%)
				=====	======	
1 08/23/2000 08:29		<b>0</b> .0	0.0	0.0	21.0	
2 08/23/2000 08:39 3 08/23/2000 08:49		0.0	0.0	0.0	21.1	
4 <b>0</b> 8/23/2000 08:59		0.0 0. <b>0</b>	<b>0.0</b> 0. <b>0</b>	0.0 0.0	21.1 21.1	
5 08/23/2000 09:09		0.0	0.0	0. <b>0</b>	21.1	•
6 08/23/2000 09:19		0.0	0.0	0.0	21.1	
7 08/23/2000 09:29		0.0	0.0	0.0	21.1	
8 08/23/2000 09:39		0.0	0.0	0.0	21.1	
9 08/23/2000 09:49	0.7	0.0	0.0	0.0	21.2	
10 08/23/2000 09:59		0.0	0.0	0.0	21.2	
11 08/23/2000 10:09		0.0	0.0	0.0	21.2	•
12 08/23/2000 10:19		0.0	0.0	0.0	21.2	Work zone Drum Aren A
13 08/23/2000 10:29		0.0	0.1	0.0	21.2	
14 08/23/2000 10:39		0.0	0.0	0.0	21.2	Drum Area A
15 08/23/2000 10:49 16 08/23/2000 10:59		0.0 0.0	0.0	0.0	21.2	
17 08/23/2000 11:09		0.0	0.0 0.0	0. <b>0</b> <b>0.0</b>	21.2 21.3	
18 08/23/2000 11:19		0.0	0.0	0.0	21.3	
19 08/23/2000 11:29	•	0.0	0.0	0.0	21.3	
20 08/23/2000 11:39		0.0	0.0	0.0	21.3	
21 08/23/2000 11:49		0.0	0.0	0.0	21.3	,
22 08/23/2000 11:59		0.0	0.0	0.0	21.2	
23 08/23/2000 12:09		0.0	0.0	0.0	. 21.2	
24 08/23/2000 12:19	0.5	0.0	0.0	0.0	21.2	
25 08/23/2000 12:29	0.5	0.0	0.0	0.0	21.2	
26 08/23/2000 12:39	0.5	0.0	0.0	0.0	21.2	
27 08/23/2000 12:49 28 08/23/2000 12:59	0.5	0.0	0.0	0.0	21.2	
29 08/23/2000 12:09	0.5 0.4	0.0 0.0	0.0 0.0	0.0 0.0	21.2 21.2	
30 08/23/2000 13:19	0.5	0.0	0.0	0.0	21.2	
31 08/23/2000 13:29	0.5	0.0	<b>0.0</b>	0.0	21.2	
32 08/23/2000 13:39	0.4	0.0	0.0	0.0	21.2	
33 08/23/2000 13:49	0.4	0.0	0.0	0.0	21.1	
34 08/23/2000 13:59	0.4	0.0	0.0	0.0	21.1	
35 08/23/2000 14:09	0.3	0.0	0.0	0.0	21.1	
36 08/23/2000 14:19	0.3	0.0	0.0	0.0	21.1	
37 08/23/2000 14:29	0.4	0.0	0.0	0.0	21.1	
38 08/23/2000 14:39	0.3	0.0	0.0	0.0	21.2	
39 08/23/2000 14:49	0.2	0.0	0.0	0.0	21.1	
40 08/23/2000 14:59 41 08/23/2000 15:09	0.3 0.3	0.0	0.0	0.0	21.1	
42 08/23/2000 15:09	0.3 0.3	0.0 0.0	0.0 0.0	0.0 0.0	21.1	
43 08/23/2000 15:29	0.3 0.3	0.0	0.0	0.0	21.1 21.1	
44 08/23/2000 15:39	0.2		70.0	0.0	21.2	
45 08/23/2000 15:49	0.2	P=====================================	<sup>10.0</sup>	0.0	21.1	
46 08/23/2000 15:59	0.2	0.0	0.0	0.0	44.4 44.4	•

21.1

21.1

0.0

0.0

48	08/23/2000 16:19	0.1	0.0	0.0	0.0	21.1
49	08/23/2000 16:29	0.1	0.0	0.0	0.0	21.1
50	08/23/2000 16:39	0.1	0.0	0.0	0.0	21.1
	08/23/2000 16:49	0.6	0.0	0.0	0.0	21.1
	08/23/2000 16:59	0.2	0.0	0.0	0.0	21.1
	08/23/2000 17:09	0.1	0.0	0.0	0.0	21.1
54	08/23/2000 17:19	0.2	0.0	0.0	0.0	21.1

Workzone Drun Aren A

DATE:	8/23/00	Dustmonitoring	
Time	<u> Instrument</u>	Location Work zine Drim Area A	Reading
0825	Sibata	Dust	2029mg/
	Multi Rae	« VO	3
		LE	L L
		$H_2$	3
p16	Sibata	Dust	0.036mg
	Multi Rae	VOC	
		LEI	-
		$H_2$ S	3
1406		Dust	0.031mg/
	Sibata		
	Multi Rae	Voc	;
		LEI	,
		H <sub>2</sub> S	
William Town			1
1515	Sibata	Dust	0034mla
	Multi Rae	VOC	
	·	· LEL	·
		H <sub>2</sub> S	
		O	
	Sibata		
	Multi Rae	Voc	
		LEL	
		H₂S	
		O	
	Sibata		
	Multi Rae .	VOC	
		LEL	
THE PARTY OF THE P		H <sub>2</sub> S	
NAME OF TAXABLE PARTY OF TAXABLE PARTY.		O	

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754

User ID: AHIBBARD Site ID: E672

Data Points: 52 Data Type: Avg Sample Period: 600 sec

Last Calibration Time: 08/24/2000 07:58

Start At: 08/24/2000 08:42 End At: 08/24/2000 17:12

===

Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

20.0 200.0 100.0 20.0 23.5 High Alarm Levels: Low Alarm Levels: 35.0 50.0 10.0 \ 10.0 STEL Alarm Levels: 100.0 25.0 15.0 TWA Alarm Levels: 35.0 10.0 10.0

===

Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

4.0 Peak Data Value: 0.0 0.0 0.2 21.7 Min Data Value: 0.5 0.0 0.0 0.0 21.0 TWA Data Value: 2.1 0.0 0.0 AVG Data Value: 1.9 0.0 0.0

Work zone Drom Area A Instrument: Multi-gas Monitor (PGM50-5P)

Site ID: E672

User ID: AHIBBARD Data Points: 52

Data Type: Avg

Sample Period: 600 sec

Serial Number: 504754

Last Calibration Time: 08/24/2000 07:58

Gas Type:

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

High Alarm Levels: Low Alarm Levels:

46 08/24/2000 16:12

47 08/24/2000 16:22

1.3

1.4

0.0

0.0

0.0

0.0

0.0

0.1

21.6

21.6

200.0 100.0 20.0 20.0 23.5 35.0 50.0 10.0 10.0 19.5

LOW	Alarm Levels:	35.0	50.0	10.0	10.0	19.5	
===== = Line	# Date Time	CO(ppm)	VOC(pp	m) H2S	===== S(ppm)	LEL(%)	OXY(%)
		-					
	08/24/2000 08:42	0.5	0.0	0.0	0.0	21.0	
	08/24/2000 08:52	0.8	0.0	0.0	0.0	21.0	Drum Area A
3	08/24/2000 09:02	0.9	0.0	0.0	0.0	21.1	No. 1
4	08/24/2000 09:12	0.9	0.0	0.0	0.0	21.2	Drum Mer It
5	08/24/2000 09:22	1.1	0.0	0.0	0.0	21.2	
6	08/24/2000 09:32	1.2	0.0	0.0	0.0	21.2	
	08/24/2000 09:42	1.3	0.0	0.0	0.0	21.2	
	08/24/2000 09:52	1.5	0.0	0.0	0.0	21.2	
	08/24/2000 10:02	1.6	0.0	0.0	0.0	21.3	
	08/24/2000 10:12	1.8	0.0	0.0	0.0	21.3	
	08/24/2000 10:22	1.8	0.0	0.0	0.0	21.3	
	08/24/2000 10:32	2.1	0.0	0.0	0.0	21.3	
	08/24/2000 10:42	2.3	0.0	0.0	0.0	21.3	
	08/24/2000 10:52	2.4	0.0	0.0	0.0	21.4	
	08/24/2000 11:02 08/24/2000 11:12	2.5	0.0	0.0	0.0	21.4	
	08/24/2000 11:12	2.5 2.7	0.0	0.0	0.0	21.4	
	08/24/2000 11:32	2.7 2.6	0.0 0.0	0.0 0.0	0.0 0.0	21.4	
	08/24/2000 11:42	2.6	0.0	0.0	0.0	21.4 21.4	
	08/24/2000 11:52	2.6	0.0	0.0	0.0	21.4	
	08/24/2000 12:02	<b>2.</b> 7	0.0	0.0	0.0	21.3	
	08/24/2000 12:12	2.8	0.0	0.0	0.1	21.4	
23 (	08/24/2000 12:22	2.9	0.0	0.0	0.1	21.3	
24 (	08/24/2000 12:32	3.1	0.0	0.0	0.1	21.3	
25 (	08/24/2000 12:42	3.3	0.0	0.0	0.2	21.2	W 44
	08/24/2000 12:52	<b>3</b> .7	0.0	0.0	0.2	21.1	
	08/24/2000 13:02	4.0	0.0	0.0	0.1	21.5	
	08/24/2000 13:12	3.8	0.0	0.0	0.1	21.7	
	08/24/2000 13:22	3.2	0.0	0.0	0.0	21.7	
	08/24/2000 13:32	2.7	0.0	0.0	0.0	21.7	
	08/24/2000 13:42	2.3	0.0	0.0	0.0	21.6	
	08/24/2000 13:52	2.2	0.0	0.0	0.0	21.6	
	)8/24/2000 14:02 )8/24/2000 14:12	1.8	0.0	0.0	0.0	21.6	
	)8/24/2000 14:12 )8/24/2000 14:22	1.5	0.0	0.0	0.0	21.6	
	8/24/2000 14:32	1.3 1.1	0.0	0.0	0.0	21.5	
	8/24/2000 14:42	0.9	0.0 0.0	0.0	0.0	21.5	
	8/24/2000 14:52	0.9	0.0	0.0	0.0	21.5	
	8/24/2000 15:02	0.8 0.8	0.0	0.0 0.0	0.0 0.0	21.4	
	8/24/2000 15:12	0.9	0.0	0.0	0.0	21.4 21.4	
	8/24/2000 15:22	1.1	0.0	0.0	0.0	21.4	
	8/24/2000 15:32	1.3	0.0	0.0	0.1	21.5	
	8/24/2000 15:42	1.3	0.0	0.0	0.0	21.6	
	8/24/2000 15:52	1.3		10.0	0.0	21.6	
<b>45</b> 0	8/24/2000 16:02	1.3	P 운영:	0.0	0.0	21.6	
46 N	8/24/2000 16·12	1 2	0.0	0.0	^ ^		

48 08/24/2000 16:32	1.5	0.0	0.0	0.1	21.6
49 08/24/2000 16:42	1.6	0.0	0.0	0.1	21.6
50 08/24/2000 16:52	1.7	0.0	0.0	0.1	21.6
51 <b>0</b> 8/24 <b>/</b> 2000 17:02	1.7	0.0	0.0	0.1	21.6
52 08/24/2000 17:12	1.6	0.0	0.0	0.0	21.6

Work Zone Drun Aven A

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754 User ID: AHIBBARD Site ID: E672 Sample Period: 600 sec Data Points: 24 Data Type: Avg Last Calibration Time: 08/25/2000 07:33 Start At: 08/25/2000 11:17 End At: 08/25/2000 15:07 CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Sensor: High Alarm Levels: 200.0 100.0 20.0 20.0 23.5 35.0 50.0 10.0 . . 10.0 19.5 Low Alarm Levels: 25.0 STEL Alarm Levels: 100.0 15.0 35.0 TWA Alarm Levels: 10.0 10.0

Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Peak Data Value: 1.0 14.0 0.1 0.3 21.2

 Peak Data Value:
 1.0
 14.0
 0.1
 0.3
 21.2

 Min Data Value:
 0.0
 0.0
 0.0
 0.0
 20.9

 TWA Data Value:
 0.2
 0.5
 0.0
 ---- ---- 

 AVG Data Value:
 0.5
 1.0
 0.0
 ---- ---- 

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Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754 User ID: AHIBBARD Site ID: E672 Data Type: Avg Sample Period: 600 sec Data Points: 11 Last Calibration Time: 08/25/2000 07:33 Start At: 08/25/2000 15:54 End At: 08/25/2000 17:34 CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Sensor: 200.0 100.0 20.0 20.0 23.5 High Alarm Levels: 10.0 \ 10.0 35.0 50.0 Low Alarm Levels: STEL Alarm Levels: 100.0 25.0 15.0 ----35.0 10.0 10.0 TWA Alarm Levels: 

=

Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

0.2 21.0 0.0 5.5 Peak Data Value: 0.0 0.0 0.0 20.8 Min Data Value: 0.0 0.0 TWA Data Value: 0.0 0.2 0.0 .... AVG Data Value: 0.0 1.0 0.0

==

Instrument: Multi-gas Monitor (PGM50-5P) User ID: AHIBBARD Site ID: E672

Sample Period: 600 sec

Data Points: 24 Data Type: Avg Last Calibration Time: 08/25/2000 07:33

Serial Number: 504754

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Gas Type:

Low Ala	arm Levels: rm Levels:	200.0 35.0	100.0 50.0	20.0 10.0	20.0 10.0	19.5				
====== = Line#	Date Time	CO(ppm)		•			OXY(%)			
		<del></del>								
	/25/2000 11:17	0.1	0.0	0.0	0.0	20.9		ii.		
	/25/2000 11:27	0.3	0.0	0.1	0.0	20.9				•
	/25/2000 11:37	0.2	0.0	0.1	0.1	20.9	•			
	/25/2000 11:47	0.3	0.0	0.1	0.1	20.9				
	<b>/25/200</b> 0 11:57	0.4	0.0	0.0	0.2	20.9				
	/25/2000 12:07	0.3	0.0	0.0	0.2	20.9				
	/25/2000 12:17	0.4	0.0	0.1	0.2	20.9				
	25/2000 12:27 25/2000 12:37	0.6	0.0 0.0	0.1 0.1	0.3 0.3	20.9 21.0				
	/25/2000 12:37 /25/2000 12:47	0.7 0.8	0.0	0.0	0.3	21.0				•
	/25/2000 12:57 /25/2000 12:57		0.0	0.0	0.3	21.1				
	/25/2000 12:07 /25/2000 13:07		0.0	0.0	0.3	21.1				
	/25/2000 13:17		0.0	0.0	0.3	21.1				
	/25/2000 13:27		0.0	0.0	0.3	21.1				
	/25/2000 13:37		0.0	0.0	0.3	21.1				
	/25/2000 13:47		0.0	0.0	0.3	21.1				
17 08,	/25/2000 13:57	0.7	0.0	0.0	0.3	21.1				4
18 08	/25/2000 14:07	0.6	0.1	0.0	0.3	21.1				
19 08	/25/2000 14:17	0.6	0.0	0.0	0.3	21.1				
20 08	/25/2000 14:27	0.4	0.0	0.0	0.1	21.2				
	/25/2000 14:37	0.3	14.0	0.0	0.2	21.1				
	/25/2000 14:47	0.0	3.0	0.0	0.1	21.1				
	/25/2000 14:57		6.1	0.0	0.1	21.0				
24 08/	/25/2000 15:07	0.0	0.1	0.0	0.1	20.9			·	

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754

User ID: AHIBBARD Site ID: E67

Site ID: E672 Data Type: Avg

Sample Period: 600 sec

Last Calibration Time: 08/25/2000 07:33

= C-2 Tue

Gas Type: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

High Alarm Levels: Low Alarm Levels:

11 08/25/2000 17:34

Data Points: 11

200.0 100.0 20.0 20.0 23.5 35.0 50.0 10.0 10.0 19.5

0.0

20.8

Date Time CO(ppm) VOC(ppm) H2S(ppm) LEL(%) Line# \_\_\_\_\_\_ 1 08/25/2000 15:54 0.0 2.6 0.0 0.1 21.0 2 08/25/2000 16:04 0.0 0.2 21.0 5.5 0.0 3 08/25/2000 16:14 0.0 0.0 0.1 21.0 0.7 4 08/25/2000 16:24 0.0 0.3 0.0 0.1 20.9 5 08/25/2000 16:34 0.0 1.0 0.0 0.0 21.0

6 08/25/2000 16:44 0.0 0.8 0.0 0.0 20.9 7 08/25/2000 16:54 0.0 0.0 0.0 0.0 20.9 8 08/25/2000 17:04 0.0 0.0 0.0 0.0 20.9 9 08/25/2000 17:14 0.0 0.0 0.1 0.0 20.8 10 08/25/2000 17:24 0.0 0.0 0.0 20.8 0.0

0.0

0.0

0.0

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754

User ID: AHIBBARD Site ID: E672

Data Points: 38 Data Type: Avg Sample Period: 600 sec

Last Calibration Time: 08/26/2000 07:34

Start At: 08/26/2000 08:06 End At: 08/26/2000 14:16

== C----

Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

20.0 20.0 23.5 200.0 High Alarm Levels: 100.0 35.0 50.0 10.0 \, 10.0 Low Alarm Levels: 19.5 STEL Alarm Levels: 100.0 25.0 15.0 -----TWA Alarm Levels: 35.0 10.0

TWA Alarm Levels: 35.0 10.0 10.0 ----

==

Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

Peak Data Value: - 0.1 20.0 0.0 0.0 21.5 0.0 0.0 Min Data Value: 0.0 0.0 20.9 TWA Data Value: 0.0 0.7 0.0 .... AVG Data Value: 0.0 0.9 0.0

Page: 1

Instrument: Multi-gas Monitor (PGM50-5P)

Site ID: E672

Data Points: 38 Data Type: Avg

User ID: AHIBBARD

Last Calibration Time: 08/26/2000 07:34

Serial Number: 504754

Sample Period: 600 sec

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Gas Type:

20.0 23.5 200.0 100.0 20.0 High Alarm Levels: Low Alarm Levels 35 N 50.0 10.0 100 195

Low Alarm Levels:	35.0	50.0	10.0	10.0	19.5	
Line# Date Time	CO(ppm)	VOC(pp	m) H25	(ppm)	LEL(%)	OXY(%)
were now with data with and and are some and and are some and and and and and and and and and and	·					THE ALLS CALLS CATE THE THE SAME COMP AND THE SAME CATE AND THE SA
1 08/26/2000 08:06	0.0	10.7	0.0	0.0	20.9	
2 08/26/2000 08:16	0.0	20.0	0.0	0.0	21.0	
3 08/26/2000 08:26	0.0	0.7	0.0	0.0	21.0	
4 08/26/2000 08:36	0.0	2.1	0.0	0.0	21.1	
5 08/26/2000 08:46	0.0	1.8	0.0	0.0	21.1	
6 08/26/2000 08:56	0.0	0.0	0.0	0.0	21.2	
7 08/26/2000 09:06	0.0	0.0	0.0	0.0	21.2	
8 08/26/2000 09:16	0.0	0.0	0.0	0.0	21.3	
9 08/26/2000 09:26	0.0	0.0	0.0	0.0	21.3	
10 08/26/2000 09:36	0.0	0.0	0.0	0.0	21.3	
11 08/26/2000 09:46	0.0	0.0	0.0	0.0	21.4	
12 08/26/2000 09:56	0.0	0.4	0.0	0.0	21.5	
13 08/26/2000 10:06	0.0	0.0	0.0	0.0	21.5	
14 08/26/2000 10:16	0.1	0.1	0.0	0.0	21.5	•
15 08/26/2000 10:26	0.0	0.0	0.0	0.0	21.5	
16 08/26/2000 10:36	0.0	0.0	0.0	0.0	21.5	
17 08/26/2000 10:46	0.0	0.0	0.0	0.0	21.5	
18 08/26/2000 10:56	0.0	0.0	0.0	0.0	21.5	
19 08/26/2000 11:06	0.0	0.0	0.0	0.0	21.5	
20 08/26/2000 11:16	0.0	0.0	0.0	0.0	21.5	· ·
21 08/26/2000 11:26	0.0	0.0	0.0	0.0	21.5	
22 08/26/2000 11:36 23 08/26/2000 11:46	0.0 <b>0.0</b>	0.0	0.0	0.0 0.0	21.5 21.5	
24 08/26/2000 11:56	0.0	0.0 0.0	0.0 0.0	0.0	21.5	
25 08/26/2000 12:06	0.0	0.0	0.0	0.0	21.5	<b>~</b>
26 08/26/2000 12:16	0.0	0.0	0.0	0.0	21.5	
27 08/26/2000 12:26	0.0	0.0	0.0	0.0	21.5	
28 08/26/2000 12:36	0.0	0.0	0.0	0.0	21.5	
29 08/26/2000 12:46	0.0	0.0	0.0	0.0	21.5	
30 08/26/2000 12:56	0.0	0.0	0.0	0.0	21.5	
31 08/26/2000 13:06	0.0	0.0	0.0	0.0	21.5	
32 08/26/2000 13:16	0.0	0.0	0.0	0.0	21.5	
33 08/26/2000 13:26	0.0	0.0	0.0	0.0	21.5	
34 08/26/2000 13:36	0.0	0.0	0.0	0.0	21.5	
35 08/26/2000 13:46	0.0	0.0	0.0	0.0	21.5	
36 08/26/2000 13:56	0.0	0.0	0.0	0.0	21.5	
37 08/26/2000 14:06	0.0	0.0	0.0	0.0	21.5	
38 08/26/2000 14:16	0.0	0.0	0.0	0.0	21.5	

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754 User ID: AHIBBARD Site ID: E672 Data Points: 56 Data Type: Avg Sample Period: 600 sec Last Calibration Time: 08/28/2000 07:43 Start At: 08/28/2000 08:04 End At: 08/28/2000 17:14 == Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) 200.0 100.0 20.0 20.0 High Alarm Levels: 35.0 Low Alarm Levels: 50.0 10.0 ( 10.0 19.5 15.0 ----STEL Alarm Levels: 100.0 25.0 35.0 TWA Alarm Levels: 10.0 10.0

<del>--</del>

Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

0.0 1.0 0.0 0.0 · 21.5 Peak Data Value: Min Data Value: 0.0 0.0 0.0 0.0 20.9 TWA Data Value: 0.0 0.0 0.0 .... AVG Data Value: 0.0 0.0 0.0

===

Instrument: Multi-gas Monitor (PGM50-5P)

Site ID: E672

User ID: AHIBBARD Data Points: 56

47 08/28/2000 15:44

0.0

0.0

0.0

0.0

21.5

Data Type: Avg

Sample Period: 600 sec

Serial Number: 504754

Last Calibration Time: 08/28/2000 07:43

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Gas Type:

High Alarm Levels: 200.0 100.0 20.0 20.0 23.5 19.5 10.0 10.0 Low Alarm Levels: 35.0 50.0

\_\_\_\_

Low	Alarm Levels:	35.0	JU.U	10.0	10.0	15.5	
				· ·			
= Line	# Date Time	CO(ppm)	VOC(pp	m) H2S	S(ppm)	LEL(%)	OXY(%)
=							
	08/28/2000 08:04		0.0	0.0	0.0	20.9	
	08/28/2000 08:14		0.0	0.0	0.0	20.9	
	08/28/2000 08:24		0.0	0.0	0.0	21.0	
	08/28/2000 08:34		0.0	0.0	0.0	21.0	
	08/28/2000 08:44	0.0	0.0	0.0	0.0	21.0	
	08/28/2000 08:54	0.0	0.0	0.0	0.0	21.1	
	08/28/2000 09:04	0.0	0.0	0.0	0.0	21.1	
	08/28/2000 09:14	0.0	0.0	0.0	0.0	21.1	
	08/28/2000 09:24	0.0	0.0	0.0	0.0	21.1	•
	08/28/2000 09:34		0.0	0.0	0.0	21.2	
	08/28/2000 09:44		0.0	0.0	0.0	21.3	
	08/28/2000 09:54		0.0	0.0	0.0	21.4	
	08/28/2000 10:04		0.0	0.0	0.0	21.4	
	08/28/2000 10:14		0.0	0.0	0.0	21.4	
	08/28/2000 10:24		0.0	0.0	0.0	21.3	
	08/28/2000 10:34		0.0	0.0	0.0	21.3	
17	08/28/2000 10:44		0.0	0.0	0.0	21.3	
			0.0	0.0	0.0 0.0	21.3 21.3	
19	08/28/2000 11:04		0.0	0.0	0.0	21.3	
20	08/28/2000 11:14		0.0	0.0 0.0	0.0	21.4	
21 22	08/28/2000 11:24 08/28/2000 11:34		0.0 0.0	0.0	0.0	21.3	
	08/28/2000 11:44		0.0	0.0	0.0	21.3	
	08/28/2000 11:54		0.0	0.0	0.0	21.4	
	08/28/2000 12:04		0.0	0.0	0.0	21.4	Name of the
	08/28/2000 12:14		0.0	0.0	0.0	21.4	
27	08/28/2000 12:24		0.0	0.0	0.0	21.3	
	08/28/2000 12:34		0.0	0.0	0.0	21.3	
	08/28/2000 12:44		0.0	0.0	0.0	21.3	
	08/28/2000 12:54		0.0	0.0	0.0	21.3	
	08/28/2000 13:04	0.0	0.0	0.0	0.0	21.3	
	08/28/2000 13:14	0.0	0.9	0.0	0.0	21.3	
	08/28/2000 13:24		1.0	0.0	0.0	21.3	
	08/28/2000 13:34		0.0	0.0	0.0	21.3	
	08/28/2000 13:44	0.0	0.0	0.0	0.0	21.3	
36	08/28/2000 13:54	0.0	0.0	0.0	0.0	21.4	
		0.0	0.0	0.0	0.0	21.3	
	08/28/2000 14:14	0.0	0.0	0.0	0.0	21.3	
39	08/28/2000 14:24	0.0	0.0	0.0	0.0	21.3	
	08/28/2000 14:34	0.0	0.0	0.0	0.0	21.3	
41	08/28/2000 14:44	0.0	0.0	0.0	0.0	21.3	
	08/28/2000 14:54	0.0	0.0	0.0	0.0	21.2	
43	08/28/2000 15:04	0.0	0.0	0.0	0.0	21.2	
44	08/28/2000 15:14	0.0	PDQ.	<sub>7</sub> 0.0	0.0	21.3	
45	08/28/2000 15:24	0.0	P 4999 :	٥.0 ئ	0.0	21.4	
46	08/28/2000 15:34	0.0	0.0	0.0	0.0	21.5	•
A 77	00 /00 /0000 1 E. A.A.	0.0	^ ^	^ ^	0.0	21 5	

48	08/28/2000 15:54	0.0	0.0	0.0	0.0	21.5
	08/28/2000 16:04	0.0	0.0	0.0	0.0	21.5
50	08/28/2000 16:14	0.0	0.0	0.0	0.0	21.4
51	08/28/2000 16:24	0.0	0.0	0.0	0.0	21.4
52	08/28/2000 16:34	0.0	0.0	0.0	0.0	21.5
53	08/28/2000 16:44	0.0	0.0	0.0	0.0	21.5
54	08/28/2000 16:54	0.0	0.0	0.0	0.0	21.4
55	08/28/2000 17:04	0.0	0.0	0.0	0.0	21.4
56	08/28/2000 17:14	0.0	0.0	0.0	0.0	21.3

Serial Number: 504754 Instrument: Multi-gas Monitor (PGM50-5P) User ID: AHIBBARD Site ID: E672 Data Points: 41 Data Type: Avg Sample Period: 600 sec Last Calibration Time: 08/29/2000 07:59 Start At: 08/29/2000 10:36 End At: 08/29/2000 17:16 CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Sensor: High Alarm Levels: 200.0 100.0 20.0 20.0 23.5 35.0 Low Alarm Levels: 50.0 10.0 10.0 19.5 15.0 STEL Alarm Levels: 100.0 25.0 TWA Alarm Levels: 35.0 10.0 10.0 .... CO(ppm) VOC(ppm) H2S(ppm) LEL(%) Sensor: OXY(%) Peak Data Value: 0.0 0.0 0.0 0.0 21.4 Min Data Value: 0.0 0.0 0.0 0.0 TWA Data Value: 0.0 0.0 0.0 ----AVG Data Value: 0.0 0.0 0.0 

===

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754

User ID: AHIBBARD Site ID: E672

Data Type: Avg Data Points: 41

Sample Period: 600 sec

Last Calibration Time: 08/29/2000 07:59

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Gas Type:

High Alarm Levels: 100.0 20.0 200.0 20.0 23.5 Low Alarm Levels: 35.0 50.0 10.0 10.0 19.5

LOWAN	A1111 EQ # Q1Q.	55.0	50.0	10.0	10.0	19.9	
			<u></u>	====			
Line#	Date Time	CO(ppm)	VOC(ppm	) H25	S(ppm)	LEL(%)	OXY(%)
							THE PARTY NAMED AND THE PARTY NAMED AND ADDRESS OF THE PARTY N
= 1 08	/ <b>2</b> 9/ <b>2</b> 000 10: <b>3</b> 6	<b>0</b> .0	0.0	0.0	0.0	21.4	
	/29/2000 10:30	0.0	0.0	0.0	0. <b>0</b>	21.4	
	/29/2000 10:56	0.0	<b>0</b> .0	0.0	0. <b>0</b>	21.4	
	/29/2000 11:06	0.0	0.0	0.0	<b>0.0</b>	21.4	
_	/29/2000 11:16	0.0	0. <b>0</b>	0.0	<b>0.</b> 0	21.4	
	/29/2000 11:26	0.0	0.0	0.0	0.0	21.4	et.
	/29/2000 11:36	<b>0</b> .0	0. <b>0</b>	0.0	0.0	21.4	
	/29/2000 11:46	<b>0</b> .0	0.0	0.0	0.0	21.4	
	/29/2000 11:56	0.0	0. <b>0</b>	0.0	0.0	21.4	
	/29/2000 12:06	0.0	0.0	0.0	0.0	21.4	
	/29/2000 12:16	0.0	0.0	0.0	0.0	21.4	
	/29/2000 12:26	0.0	0.0	0.0	0.0	21.4	
13 08	/29/2000 12:36	0.0	0.0	0.0	0.0	21.4	
	/29/2000 12:46	0.0	0.0	0.0	0.0	21.4	
15 08	/29/2000 12:56	0.0	0.0	0.0	0.0	21.4	
16 08	/29/2000 13:06	<b>0</b> .0	0.0	0.0	0.0	21.4	
17 08	/29/2000 13:16	0.0	0.0	0.0	0.0	21.4	
18 08	/29/2000 13:26	0.0	0.0	0.0	0.0	21.4	
	/29/2000 13:36	0.0	0.0	0.0	0.0	21.4	
	/29/2000 13:46	0.0	0.0	0.0	0.0	21.4	
	/29/2000 13:56	0.0	0.0	0.0	0.0	21.3	•
	/29/2000 14:06	0.0	0.0	0.0	0.0	21.3	
	/29/2000 14:16	0.0	0.0	0.0	0.0	21.3	
	/29/2000 14:26	0.0	0.0	0.0	0.0	21.3	
	/29/2000 14:36	0.0	0.0	0.0	0.0	21.3	•
	/29/2000 14:46	0.0	0.0	0.0	0.0	21.3	
	/29/2000 14:56	0.0	0.0	0.0	0.0	21.3	
	29/2000 15:06	0.0	0.0	0.0	0.0	21.3	
	29/2000 15:16	0.0	0.0	0.0	0.0	21.3	
	29/2000 15:26	0.0	0.0	0.0	0.0	21.3	
	29/2000 15:36	0.0	0.0	0.0	0.0	21.3	
	29/2000 15:46	0.0	0.0	0.0	0.0	21.3	
	29/2000 15:56	0.0		0.0	0.0	21.3	
	29/2000 16:06	0.0		0.0	0.0	21.3	
	29/2000 16:16	0.0		0.0	0.0	21.3	
	29/2000 16:26	0.0		0.0	0.0	21.3	
	29/2000 16:36	0.0		0.0	0.0	21.2	
	29/2000 16:46 29/2000 16:56	0.0		0.0	0.0	21.2	
	29/2000 16:56 29/2000 17:06	0.0		0.0	0.0	21.2	
	29/2000 17:06 29/2000 17:16	0.0		0.0	0.0	21.2	
₩1 \Q\	73/7000 T\:TQ	<b>0</b> .0	0.0	0.0	0.0	21.2	

Site ID: E672

User ID: AHIBBARD Data Type: Avg Data Points: 53

Sample Period: 600 sec

Serial Number: 504754

Last Calibration Time: 08/30/2000 07:31

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Gas Type:

200.0 100.0 20.0 20.0 23.5 High Alarm Levels: 35.0 50.**0** 10.0 10.0 19.5 Low Alarm Levels:

=			**	004	14004	× 1100	/	1 5 2 2 2 2 3	~>/\/~>	•		
Lin		Date T		CO(ppm)		-			OXY(%) =======		·	
1	08/3	3 <mark>0/2000</mark>	08:03	<b>0</b> .0	0.0	0.0	0.0	20.9				
2	08/3	30/2000	08:13	<b>0</b> .0	0.0	0.0	0.0	<b>2</b> 0. <b>9</b>				
3	_	30/2000		<b>0</b> .0	0.2	0.0	0.0	20.9	·			٠
4		30/2 <mark>000</mark>		0.0	0.0	0.0	0.0	20.9				
5		30/2000		0.0	0.1	0.0	0.0	21.0				
6		30/2000		0.0	0.0	0.0	0.0	21.0				
7		30/2000		0.0	0.0	0.0	0.0	21.0				
		30/2000		0.0	0.0	0.0	0.0	21.0				
		30/2000		0.0	0.0	0.0	0.0	21.0				
		30/2000		0.0	0.0	0.0	0.0	21.1				
		30/2000		0.0	0.0	0.0	0.0	21.0				
	_	30/2000 30/2000		0.0	0.0 0.3	0.0	0.0 0.1	21.0 21.1				
		30/2000 30/2000		0.0 0.0	0.3 0.9	0.0	0.1	21.1				
		30/2000 30/2000		0.0	0.0	0.0	0.1	21.3				
		30/2000		0.1	0.0	0.0	0.2	21.3				
		30/2000		0.1	0.0	0.0	0.1	21.3				
		30/2000		0.1	0.0	0.0	0.1	21.4				
19	08/3	30/2000	11:03	0.2	0.0	0.0	0.1	21.4				
20	08/3	30/2000	11:13	0.2	0.0	0.0	0.1	21.4				
21		30/2000		0.3	0.0	0.0	0.1	21.4				
22		30/2000		0.2	0.0	0.0	0.1	21.4				
23		30/2000		0.2	0.0	0.0	0.1	21.4				
24		30/2000		0.3	0.0	0.0	0.2	21.4				
25		30/2000		0.5	0.0	0.0	0.2	21.4				
26		30/2000		0.6	0.0	0.0	0.2	21.4			*	
27		30/2000		0.7	0.0	0.0	0.2	21.5	•			
29		30/2000 30/2000		0.7 0.7	0.0	0.0	0.2	21.5				•
30		30/2000		0.7	0.0 0.0	0.0 0.0	0.2 0.3	21.5 21.5				
31		30/2000		0.8	0.0	0.0	0.3	21.5				
		30/2000		0.9	2.9	0.0	0.3	21.5				
		30/2000		0.7	3.2	0.0	0.2	21.6				
		0/2000		0.5	22.7	0.0	0.3	21.6				
		0/2000		0.4	5.1	0.0	0.1	21.5				•
36	08/3	0/2000	13:53	0.3	0.0	0.0	0.1	21.4				
		0/2000		0.4	0.0	0.0	0.2	21.4				
		0/2000		0.4	0.0	0.0	0.3	21.4				
		0/2000		0.4	0.0	0.0	0.3	21.4				
		0/2000		0.4	0.0	0.0	0.2	21.5				
		0/2000		0.2	0.0	0.0	0.1	21.5				
* .		0/2000		0.2	0.0	0.0	0.1	21.4				
		0/2000		0.1	0.1	0.0	0.2	21.4				
		0/2000		0.1	P 중당:	10.0	0.1	21.5	4			
		0/2000		0.0 0.0	0.0	~0.0 0.0	0.0	21.5		٠		
		0/2000		0.0	0.0	0.0	0.0 0.0	21.5 21.5				
7/		THE RESERVE AND ADDRESS OF THE PARTY AND ADDRE		0.0	٠.٠	0.0	J.U	<u>د. ۰. ۵</u>				

48	08/30/2000 15:53	0.0	0.0	0.0	0.0	21.4
49	08/30/2000 16:03	0.0	0.0	0.0	0.0	21.4
50	08/30/2000 16:13	0.0	0.0	0.0	0.0	21.4
51	08/30/2000 16:23	0.0	0.0	0.0	0.1	21.3
52	08/30/2000 16:33	0.0	0.0	0.0	0.0	21.4
53	08/30/2000 16:43	0.0	0.0	0.0	0.0	21.4

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754 User ID: AHIBBARD Site ID: E672 Data Points: 53 Data Type: Avg Sample Period: 600 sec Last Calibration Time: 08/30/2000 07:31 Start At: 08/30/2000 08:03 End At: 08/30/2000 16:43 Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) 200.0 100.0 20.0 20.0 23.5 High Alarm Levels: 50.0 35.0 10.0 10.0 19.5 Low Alarm Levels: 25.0 100.0 15.0 ----STEL Alarm Levels: TWA Alarm Levels: 35.0 10.0 10.0 

=

Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

0.9 22.7 0.0 0.3 21.6 Peak Data Value: 0.0 0.0 0.0 0.0 20.9 Min Data Value: 0.2 0.7 0.0 TWA Data Value: AVG Data Value: 0.2 0.7 0.0

-

Instrument: Multi-gas Monitor (PGM50-5P) User ID: AHIBBARD Site ID: E672

Data Points: 60 Data Type: Avg Last Calibration Time: 08/31/2000 07:15 Sample Period: 600 sec

Serial Number: 504754

Gas Type:

46 08/31/2000 15:13

47 08/31/2000 15:23

0.4

0.4

0.0

0.0

0.0

0.0

0.3

0.3

21.4

21.4

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

_ ·	O(ppm) V					JXY(%)					
High Alarm Levels: Low Alarm Levels:	200.0 35.0	100.0 50.0	20.0 10.0	20.0 10.0	23.5 19.5						
							. <u>.                                   </u>				-==
= Line# Date Time	CO(ppm)	VOC(ppi	n) H2S	(ppm)	LEL(%)	OXY(%)					
							<u>. — — — — — — — — — — — — — — — — — — —</u>				:==
= 1 08/31/2000 <b>0</b> 7:43	0.0	0.0	0.0	0.0	21.0						
2 08/31/2000 07:53		0.0	0.0	0.0	21.0						٠
3 08/31/2000 08:03		4.4	0.0	0.0	21.0						•
4 08/31/2000 08:13		3.6	0.0	0.0	21.0						
5 08/31/2000 08:23		0.6	0.0	0.0	21.0	. ف					
6 08/31/2000 08:33		0.6	0.0	0.0	21.0						
7 08/31/2000 08:43		0.0	0.0	0.0	21.0						
8 08/31/2000 08:53		0.0	0.0	0.0	21.0						
9 08/31/2000 09:03		0.5	0.0	0.0	21.1						
10 08/31/2000 09:13 11 08/31/2000 09:23			0.1 0.0	0. <b>0</b> <b>0.0</b>	21.1 21.1						
11 08/31/2000 09:23 12 08/31/2000 09:33			0.0	0.0	21.1						
13 08/31/2000 09:43			0.0	0.0	21.2						
14 08/31/2000 09:53			0.0	0.0	21.2	•					
15 08/31/2000 10:03			0.0	0.0	21.2						
16 08/31/2000 10:13		0.0	0.0	0.0	21.3						
17 08/31/2000 10:23		0.0	0.0	0.0	21.2						
18 08/31/2000 10:33		0.0	0.0	0.1	21.2		,				
19 08/31/2000 10:43		0.0	0.0	0.3	21.2						
20 08/31/2000 10:53		0.0	0.0	0.3	21.3				,		
21 08/31/2000 11:03		0.0	0.0	0.3	21.3						
22 08/31/2000 11:13		0.0	0.0	0.3	21.4						
23 08/31/2000 11:23 24 08/31/2000 11:33		0.0 0.0	0.0 0.0	0.3	21.4 21.4						
25 08/31/2000 11:43		0.0 0.0	0.0	0.3	21.4				-		
26 08/31/2000 11:53		0.0	0.0	0.0	21.5						
27 08/31/2000 12:03		0.0	0.0	0.0	21.5						
28 08/31/2000 12:13		0.0	0.0	0.0	21.5						
29 08/31/2000 12:23		0.0	0.0	0.0	21.5						
30 08/31/2000 12:33	0.0	0.0	0.0	0.0	21.5						
31 08/31/2000 12:43		0.0	0.0	0.0	21.5						
32 08/31/2000 12:53	_	0.0	0.0	0.0	21.5						
33 08/31/2000 13:03		0.0	0.0	0.0	21.4						
34 08/31/2000 13:13		0.0	0.0	0.0	21.4						
35 08/31/2000 13:23		0.0	0.0	0.0	21.5	•					
36 08/31/2000 13:33 37 08/31/2000 13:43	0.0	0.0	0.0	0.0	21.4						
38 08/31/2000 13:53	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	21.4 21.4						
39 08/31/2000 14:03		0.0	0.0	0.0	21.4						
40 08/31/2000 14:13	0.0	0.0	0.0	0.0	21.4						
41 08/31/2000 14:23	0.0	0.0	0.0	0.1	21.4						
42 08/31/2000 14:33	0.0	0.0	0.0	0.2	21.4						
43 08/31/2000 14:43	0.0	0.0	0.0	0.3	21.4						
44 08/31/2000 14:53	0.2		<sub>7</sub> 0.0	0.3	21.4	•		•			
45 08/31/2000 15:03	0.3	P <del>} }</del> :	<b>0.0</b> °	0.3	21.4					•	

48	08/31/2000 15:33	0.6	0.0	0.0	0.3	21.4
49	08/31/2000 15:43	0.6	0.0	0.0	0.3	21.4
50	08/31/2000 15:53	0.6	0.0	0.0	0.3	21.4
51	08/31/2000 16:03	0.4	0.0	0.0	0.2	21.5
52	08/31/2000 16:13	0.3	0.0	0.0	0.2	21.5
53	08/31/2000 16:23	0.2	0.0	0.0	0.2	21.5
54	08/31/2000 16:33	0.1	0.0	0.0	0.2	21.5
55	08/31/2000 16:43	0.0	0.0	0.0	0.1	21.6
56	08/31/2000 16:53	0.0	0.0	0.0	0.0	21.6
57	08/31/2000 17:03	0.0	0.0	0.0	0.0	21.6
58	08/31/2000 17:13	0.0	0.0	`0.0	0.0	21.5
59	08/31/2000 17:23	1.0	0.0	0.0	0.1	21.5
60	08/31/2000 17:33	0.7	0.0	0.0	0.0	21.5

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754 Site ID: E672 User ID: AHIBBARD Data Type: Avg Sample Period: 600 sec Data Points: 60 Last Calibration Time: 08/31/2000 07:15 Start At: 08/31/2000 07:43 End At: 08/31/2000 17:33 CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Sensor: 20.0 20.0 200.0 100.0 23.5 High Alarm Levels: Low Alarm Levels: 35.0 50.0 10.0 10.0 19.5 15.0 STEL Alarm Levels: 100.0 25.0 \*\*\*\*\* 35.0 10.0 10.0 TWA Alarm Levels: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Sensor:

4.4 0.1 0.3 21.6 Peak Data Value: 1.0

0.0 0.0 0.0 0.0 21.0 Min Data Value: 0.1 0.3 0.0 TWA Data Value: .... AVG Data Value: 0.1 0.2 0.0

User ID: AHIBBARD Site ID: E672

Data Type: Avg

Sample Period: 600 sec

Serial Number: 504754

Last Calibration Time: 09/01/2000 07:09

Gas Type:

Data Points: 22

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

High Alarm Levels:

200.0 100.0 20.0 20.0 23.5 35.0 50.0 10.0 10.0 19.5

Low Alarm Levels: 35.0 50.0 10.0 10.0 19.5

Line# Date Time CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

						····	
1	09/01/2000 07:40	0.0	0.0	0.0	0.0	20.9	
2	09/01/2000 07:50	0.0	0.0	0.0	0.0	20.9	
3	09/01/2000 08:00	0.0	0.0	0.0	0.0	21.0	
4	09/01/2000 08:10	0.0	0.0	0.0	0.0	21.0	
5	09/01/2000 08:20	0.0	0.0	0.0	0.0	21.0	
6	09/01/2000 08:30	0.0	0.0	0.0	0.0	21.1	
7	09/01/2000 08:40	0.0	0.0	0.0	0.0	21.1	
8	09/01/2000 08:50	0.0	0.0	0.0	0.0	21.2	
9	09/01/2000 09:00	0.0	0.0	0.0	0.0	21.2	
10	09/01/2000 09:10	0.0	0.0	0.0	0.0	21.2	
11	09/01/2000 09:20	0.0	0.0	0.0	0.0	21.2	
12	<del></del>	0.0	0.0	0.0	0.0	21.3	
13		0.1	0.0	0.0	0.0	21.2	
14		0.3	0.0	0.0	0.0	21.3	
15	09/01/2000 10:00	0.4	0.0	0.0	0.0	21.3	
16	_ <del>_</del>	0.6	0.0	0.0	0.0	21.3	
17		0.7	0.0	0.0	0.0	21.3	
18	09/01/2000 10:30	0.5	0.0	0.0	0.0	21.4	
19	09/01/2000 10:40	0.5	0.0	0.0	0.0	21.4	
20	09/01/2000 10:50	0.2	0.0	0.0	0.0	21.3	
21	09/01/2000 11:00	0.2	0.0	0.0	0.0	21.3	
22	09/01/2000 11:10	0.1	0.0	0.0	0.0	21 A	

Serial Number: 504754 Instrument: Multi-gas Monitor (PGM50-5P) User ID: AHIBBARD Site ID: E672 Data Type: Avg Sample Period: 600 sec Data Points: 22 Last Calibration Time: 09/01/2000 07:09 Start At: 09/01/2000 07:40 End At: 09/01/2000 11:10 CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Sensor: 200.0 100.0 20.0 High Alarm Levels: 20.0 23.5 35.0 Low Alarm Levels: 50.0 10.0 \ 10.0 19.5 STEL Alarm Levels: 100.0 25.0 15.0 TWA Alarm Levels: 35.0 10.0 10.0

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Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

0.7 Peak Data Value: 0.0 0.0 0.0 21.4 Min Data Value: 0.0 0.0 0.0 0.0 20.9 TWA Data Value: 0.1 0.0 0.0 AVG Data Value: 0.2 0.0 0.0

Instrument: Multi-gas Monitor (PGM50-5P) User ID: AHIBBARD

Site ID: E672

Data Points: 40

Data Type: Avg

Sample Period: 600 sec

Serial Number: 504754

Last Calibration Time: 09/05/2000 10:03

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Gas Type:

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

High Alarm Levels: Low Alarm Levels:

200.0 100.0 20.0 20.0 35.0 50.0 10.0 10.0 19.5

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Date Time \_\_\_\_\_\_\_\_

<del></del>						
1	09/05/2000 10:28	0.0	0.0	0.0	0.0	21.2
2	09/05/2000 10:38	0.0	0.0	0.0	0.0	21.2
3	09/05/2000 10:48	0.0	0.0	0. <b>0</b>	0.0	21.2
4	09/05/2000 10:58	0.0	0.0	0.0	0.0	21.2
5	09/05/2000 11:08	0.0	0.0	0.0	0.0	21.1
6	09/05/2000 11:18	0.0	0.0	0.0	0.0	21.2
7	09/05/2000 11:28	0.0	0.0	0.0	0.0	21.1
8	09/05/2000 11:38	0.0	0.0	0.0	0.0	21.1
9	09/05/2000 11:48	0.0	0.0	0.0	0.0	21.1
10	09/05/2000 11:58	0.0	0.0	<b>0</b> .0	0.0	21.2
11	09/05/2000 12:08	0.0	0.0	0.0	0.0	21.2
12		0.0	0.0	0.0	0.0	21.3
13		0.0	0.0	0.0	0.0	21.3
14		0.0	0.0	0.0	<b>0</b> .0	21.3
15	09/05/2000 12:48	0.0	0.0	0.0	0.0	21.4
16	09/05/2000 12:58	0.0	0.0	0.0	0.0	21.4
17		0.0	0.0	0.0	0.0	21.4
18		0.0	0.0	0.0	0.0	21.5
19		0.0	0.0	0.0	0.0	21.4
20		0.0	0.0	0.0	0.0	21.4
21	09/05/2000 13:48	0.0	0.0	0.0	0.0	21.3
22	09/05/2000 13:58	0.0	0.0	0.0	0.0	21.4
23	09/05/2000 14:08	0.0	0.0	0.0	0.0	21.5
24	09/05/2000 14:18	0.0	0.0	0.0	0.0	21.4
25	09/05/2000 14:28	0.0	0.0	0.0	0.0	21.3
26	09/05/2000 14:38	0.0	0.0	0.0	0.0	21.3
27	09/05/2000 14:48	0.0	0.0	0.0	0.0	21.2
28	09/05/2000 14:58	0.0	0.0	0.0	0.0	21.2
29 30	09/05/2000 15:08 09/05/2000 15:18	0.0	0.0	0.0	0.0	21.1
30 31	09/05/2000 15:18	0.0 0.0	0.0	0.0	0.0	21.2
32	09/05/2000 15:38	0.0	0.0 0.0	0.0	0.0	21.3 21.3
33	09/05/2000 15:48	0.0	0.0	0.0 0.0	0.0	
34	09/05/2000 15:58	0.0	0.0	0.0	0.0 0.0	21.4 21.4
35	09/05/2000 15:08	0.0	0.0	0.0	0.0	21.4
36	09/05/2000 16:18	0.0	0.0	0.0	0.0	21.4
37	09/05/2000 16:28	0.0	0.0	0.0	0.0	21.4
38	09/05/2000 16:38	0.0	0.0	0.0	0.0	21.4
39	09/05/2000 16:48	0.0	0.0	0.0	0.0	21.3
40	09/05/2000 16:58	0.7	0.0	0.0	0.0	21.3 21.3
	The same of the sa	AND II IS	<b>~</b> .~	A A.	40.00	Sim -t 4,15

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754
User ID: AHIBBARD Site ID: E672

Data Points: 40 Data Type: Avg Sample Period: 600 sec

Last Calibration Time: 09/05/2000 10:03

Start At: 09/05/2000 10:28 End At: 09/05/2000 16:58

Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

100.0 20.0 20.0 23.5 200.0 High Alarm Levels: 35.0 50.0 10.0 10.0 19.5 Low Alarm Levels: 25.0 15.0 STEL Alarm Levels: 100.0 35.0 10.0 10.0 TWA Alarm Levels:

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Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

0.7 0.0 0.0 21.5 Peak Data Value: 0.0 0.0 0.0 21,1 0.0 Min Data Value: TWA Data Value: 0.0 0.0 0.0 -----0.0 0.0 0.0 AVG Data Value:

会, 為

Site ID: E672

User ID: AHIBBARD Data Points: 52

Data Type: Avg

Sample Period: 600 sec

Serial Number: 504754

Last Calibration Time: 09/06/2000 06:59

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Gas Type:

200.0 100.0 20.0 High Alarm Levels: 20.0 23.5

35.0 50.0 10.0 10.0 19.5 Low Alarm Levels:

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) Line# Date Time OXY(%)

had 1 I'			(		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
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_ 1	09/06/2000 08:09	0.0	0.0	0.0	0.0	21.0	
2		0.0	0.0	0.0	0.0		
3		0.0	0.0	0.0	0.0	21.0	
4		<b>0</b> .0	0.0	0.0	0.0	21.0	
5	09/06/2000 08:49	0.0	0.0	0.0	0.0	21.0	
6	09/06/2000 08:59	0.0	0.0	0.0	0.1	21.0	,3,
7	09/06/2000 09:09	<b>0</b> .0	0.0	0.0	0.1	21.1	
8	09/06/2000 09:19	0.0	0.4	0.0	0.1	21.1	
9	09/06/2000 09:29	0.0	0.5	0.1	0.1	21.1	
10	09/06/2000 09:39	0.0	0.3	0.0	0.2	21.2	
	09/06/2000 09:49	0.0	0.6	0.0	0.2	21.3	
12	09/06/2000 09:59	0.0	0.0	0.0	0.1	21.3	
13	09/06/2000 10:09	0.0	0.0	0.0	0.2	21.2	
14	09/06/2000 10:19	0.0	0.0	0.0	0.3	21.2	
15		0.0	0.0	0.0	0.3	21.3	
16	09/06/2000 10:39	0.0	0.0	0.0	0.3	21.4	
17		0.0	0.0	0.0	0.2	21.4	
18		0.0	0.0	0.0	0.3	21.4	
	09/06/2000 11:09	0.0	0.0	0.0	0.3	21.4	
	09/06/2000 11:19	0.0	0.0	0.0	0.4	21.5	
21		0.0	0.0	0.0	0.4	21.5	
	09/06/2000 11:39	0.0	0.0	0.0	0.4	21.5	
23		0.0	0.0	0.0	0.4	21.5	
	09/06/2000 11:59	0.0	0.0	0.0	0.5	21.6	
	09/06/2000 12:09	0.0	0.0	0.0	0.4	21.6	
	09/06/2000 12:19	0.0	0.0	0.0	0.5	21.6	
27		<b>0</b> .0	0.0	0.0	0.4	21.7	•
	09/06/2000 12:39	<b>0</b> .0	0. <b>0</b>	0.0	0.4	21.7	
29	09/06/2000 12:49	0.0	0.0	0.0	0.4	21.7	
	09/06/2000 12:59	0.0	0.0	0.0	0.5	21.7	
31	09/06/2000 13:09	0.0	0.0	0.0	0.5	21.7	
32	09/06/2000 13:19	0.0	0.0	0.0	0.5	21.7	
33	09/06/2000 13:29	0.0	0.3	0.0	0.4	21.9	
	09/06/2000 13:39	0.0	1.4	0.0	0.3	21.8	
	09/06/2000 13:49	0.0	1.4	0.0	0.3	21.7	
	09/06/2000 13:59	0.0	2.8	0.0	0.2	21.7	
	09/06/2000 14:09	0.0	2.5	0.0	0.2	21.6	
	09/06/2000 14:19	0.0	2.6	0.0	0.2	21.6	
39	09/06/2000 14:29	0.0	1.5	0.0	0.2	21.6	
40	09/06/2000 14:39	0.0	1.1	0.0	0.2	21.6	
41	09/06/2000 14:49	0.0	0.9	0.0	0.2	21.6	
	09/06/2000 14:59	0.0	11.0	0.0	0.3	21.6	
<b>43</b>	09/06/2000 15:09	0.0	6.1	0.0	0.2	21.6	
	09/06/2000 15:19	0.0	P##:	10.0	0.1	21.5	
	09/06/2000 15:29	0.0		70.0	0.2	21.5	
	09/06/2000 15:39	0.0	0.3	0.0	0.2	21.5	
47	09/06/2000 15:49	0.0	0.6	0.0	0.2	21.5	

48	09/06/2000 15:	:59 0.0	3.2	0.0	0.2	21.5
49	09/06/2000 16:	0.0	0.1	0.0	0.1	21.5
50	09/06/2000 16:	19 0.0	0.3	0.0	0.0	21.5
51	09/06/2000 16:	29 0.0	0.0	0.0	0.0	21.5
52	09/06/2000 16:	39 0.0	0.0	0.0	0.0	21.4

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754 User ID: AHIBBARD Site ID: E672 Data Type: Avg Sample Period: 600 sec Data Points: 52 Last Calibration Time: 09/06/2000 06:59 Start At: 09/06/2000 08:09 End At: 09/06/2000 16:39 CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Sensor: 200.0 20.0 High Alarm Levels: 100.0 20.0 23.5 35.0 50.0 10.0 10.0 Low Alarm Levels: STEL Alarm Levels: 100.0 25.0 15.0 ----35.0 TWA Alarm Levels: 10.0 10.0 CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Sensor: . 0,0 11.0 0.1 0.5 21.9 Peak Data Value: Min Data Value: 0.0 0.0 0.0 0.0 20.9 TWA Data Value: 0.0 8.0 0.0 .... AVG Data Value: 0.0 8.0 0.0

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DATE:		Pealtine		
Time	Instrument	Location Dust Monitoring	Arca A.	Reading
0814	Sibata	Location Dust Monitoring work zone Dust		0.010n
	Multi Rae		VOC	
			LEL	
	-	7	H <sub>2</sub> S	
······································		•	O	
1031	Sibata	11 //	· · · · · · · · · · · · · · · · · · ·	0.015 h
	Multi Rae		VOC	
			LEL	
			H₂S	•
242		1.	70	0.016mg
	Sibata			<del>* * * * * * * * * * * * * * * * * * * </del>
	Multi Rae		Voc	
			) ARROLEL	
			/型源H <sub>2</sub> S	
<u> </u>			O	
502	Sibata	: \:	77.57.37.3	0.07(20)
	Multi Rae		voc	
			LEL	
			H₂S	-
······································			o	
******	Sibata			•
W	Multi Rae		voc	
			LEL	
			H <sub>2</sub> S	
			O	
	Sibata			
	Multi Rae .		voc	- <u> </u>
			LEL	
			H <sub>2</sub> S	£
With the second			ol	

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754 User ID: AHIBBARD Site ID: E672 Data Type: Avg Sample Period: 600 sec Data Points: 52 Last Calibration Time: 09/07/2000 07:04 Start At: 09/07/2000 08:24 End At: 09/07/2000 16:54 CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Sensor: 20.0 20.0 23.5 200.0 100.0 High Alarm Levels: 10.0 , 10.0 19.5 35.0 50.0 Low Alarm Levels: 25.0 15.0 ----STEL Alarm Levels: 100.0 10.0 10.0 35.0 TWA Alarm Levels: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Sensor:

Peak Data Value: 0.2 29.0 0.0 0.0 22.0

Min Data Value: 0.0 0.0 0.0 0.0 22.0 TWA Data Value: 0.0 2.0 0.0 .... ..... AVG Data Value: 0.0 1.8 0.0 ....

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754

User ID: AHIBBARD Site ID: E672

Data Points: 52 Data Type: Avg Sample Period: 600 sec

Last Calibration Time: 09/07/2000 07:04

Gas Type: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

High Alarm Levels: 200.0 100.0 20.0 20.0 23.5 Low Alarm Levels: 35.0 50.0 10.0 10.0 19.5

Line#	Date Time	CO(ppm) VOC(ppn	n) H2S(ppm)	LEL(%)	OXY(%)	
*** *** *** *** *** ***		<u> </u>		=======================================		

	<del></del>				····	·····
=		2.0	00.0	*		
	1 09/07/2000 08:24	0.0	29.0	0.0	0.0	21.1
	2 09/07/2000 08:34	0.0	0.2	0.0	0.0	21.1
	3 09/07/2000 08:44	0.0	0.0	0.0	0.0	21.1
	09/07/2000 08:54	0.0	10.0	0.0	0.0	21.1
Ę		0.0	0.0	0.0	0.0	21.1
•		0.0	0.0	0.0	0.0	21.1
7		0.0	0.0	0.0	0.0	21.0
8	3 09/07/2000 09:34	0.0	8.4	0.0	0.0	21.0
9	09/07/2000 09:44	0.0	1.9	0.0	0.0	21.1
10	0 09/07/2000 09:54	0.0	0.2	0.0	0.0	21.2
1	1 09/07/2000 10:04	0.0	0.6	0.0	0.0	21.2
12	2 09/07/2000 10:14	0.0	0.4	0.0	0.0	21.3
13	3 09/07/2000 10:24	0.0	6.0	0.0	0.0	21.3
14	1 09/07/2000 10:34	0.0	2.5	0.0	0.0	21.4
15	5 09/07/2000 10:44	0.0	0.0	0.0	0.0	21.5
16	5 09/07/2000 10:54	0.0	0.0	0.0	0.0	21.5
17	7 09/07/2000 11:04	0.0	0.0	0.0	0.0	21.4
18		0.0	0.0	0.0	0.0	21.4
19		0.0	0.0	0.0	0.0	21.5
20		0.0	0.0	0.0	0.0	21.5
21		0.0	0.0	0.0	0.0	21.5
22		0.0	0.0	0.0	0.0	21.6
23		0.0	0.0	0.0	0.0	21.8
24		0.0	0.0	0.0	0.0	21.8
25		0.0	0.0	0.0	0.0	21.8
26		0.0	0.0	0.0	0.0	21.9
27		0.0	0.0	0.0	0.0	22.0
28	— · <del></del>	0.0	0.0	0.0	0.0	22.0 22.0
29		0.0	0.0	0.0	0.0	21.9
30		0.0	7.3	0.0	0.0	21.8
31	09/07/2000 13:24	0.0	7.3 1.3	0.0		
32	09/07/2000 13:34	0.0	4.1	0.0	0.0	21.7
33	09/07/2000 13:44	0.2	21.5	0.0	0.0	21.7
34	09/07/2000 13:54	0.0			0.0	21.7
35	09/07/2000 14:04	0.0	0.0	0.0	0.0	21.7
36	09/07/2000 14:14	0.0	0.0	0.0	0.0	21.8
37 37	09/07/2000 14:24	0.0	0.0	0.0	0.0	21.7
38	09/07/2000 14:34		0.0	0.0	0.0	21.7
39	09/07/2000 14:44	0.0	0.0	0.0	0.0	21.6
40	09/07/2000 14:54	0.0	0.0	0.0	0.0	21.6
		0.0	0.0	0.0	0.0	21.6
41	09/07/2000 15:04	0.0	0.0	0.0	0.0	21.6
42	09/07/2000 15:14	0.0	0.0	0.0	0.0	21.5
13	09/07/2000 15:24	0.0	0.0	0.0	0.0	21.5
	09/07/2000 15:34	0.0	P 413 :	10.0	0.0	21.4
45	09/07/2000 15:44	0.0		0.0	0.0	21.5
46	09/07/2000 15:54	0.0	0.3 .	0.0	0.0	21.7
47	09/07/2000 16:04	0.0	0.0	0.0	0.0	21.7

48	09/07/2000 16:14	0.0	0.0	0.0	0.0	21.8
49	09/07/2000 16:24	0.0	0.0	0.0	0.0	21.7
50	09/07/2000 16:34	0.0	0.0	0.0	0.0	21.7
51	09/07/2000 16:44	0.0	0.0	0.0	0.0	21.6
52	09/07/2000 16:54	0.0	0.0	0.0	ס ס	21.5

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754

User ID: AHIBBARD Site ID: E672

Data Points: 50 Data Type: Avg Sample Period: 600 sec

Last Calibration Time: 09/08/2000 07:10

Start At: 09/08/2000 08:02 End At: 09/08/2000 16:12

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Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

200.0 100.0 High Alarm Levels: 20.0 20.0 23.5 19.5 Low Alarm Levels: 35.0 50.0 10.0 \ 10.0 100.0 25.0 15.0 STEL Alarm Levels: ----35.0 10.0 10.0 TWA Alarm Levels:

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Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

Peak Data Value: 1.3 7.8 0.1 0.6 21.6 , 0.0 0.0 0.0 0.0 20.9 Min Data Value: TWA Data Value: 0.6 8.0 0.0 ----AVG Data Value: 0.6 0.7 0.0

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754

User ID: AHIBBARD Site ID:

Data Points: 50 Data Type: Avg Sample Period: 600 sec Last Calibration Time: 09/08/2000 07:10 CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Gas Type: 200.0 100.0 20.0 20.0 High Alarm Levels: 23.5 Low Alarm Levels: 35.0 50.0 10.0 10.0 19.5 CO(ppm) VOC(ppm) H2S(ppm) Line# Date Time LEL(%) OXY(%)

LIN			ime	CO(ppm)	-				OXY(
						<del></del>			
== 1	09/0 <b>8</b>	/200	0 08:02	0.1	0.0	0.0	0.0	21.0	
			0 08:12		0.0	0.0	0.0	21.0	
			0 08:22	0.3	0.0	0.0		21.0	-
			0 08:32		, 0.0	0.0	0.0	21.0	
5			0 08:42		0.0	0.0	0.0	20.9	
_	-		0 08:52	0.1	0.0	0.0	0.0	20.9 2 <b>0</b> .9	ú.
7			0 09:02	0.1	0.0	0.0	0.0	20.9	μ.
			09:12	0.1	0.0	0.0	0.0	20.9	
9			0 09:22	0.1	0.3	0.0	0.0	20.9	
			0 09:32		0.7	0.0	0.0	20.9	
			0 09:42	0.4	0.1	0.0	0.0	20.9	
			0 09:52	0.3	2.0	0.0	0.0	21.0	
			0 10:02	0.3	7.8	0.0	0.0	21.0	
			0 10:12	0.3	3.2	0.0	0.0	21.1	
			0 10:22	0.4	1.4	0.0	0.0	21.1	•
			0 10:32	0.5	0.0	0.0	0.0	21.1	
			0 10:42	0.4	0.0	0.0	0.0	21.1	
			0 10:52	0.4	1.9	0.0	0.0	21.1	
			0 11:02	0.5	1.5	0.0	0.1	21.1	
	09/08			0.4	0.0	0.0	0.1	21.2	
21	_		0 11:22	0.4	0.0	0.0	0.0	21.2	
22			0 11:32	0.4	0.0	0.0	0.0	21.2	
23		/2000	0 11:42	0.4	0.0	0.0	0.0	21.2	
24			0 11:52	0.4	0.0	0.0	0.0	21.2	
25	09/08	/2000	12:02	0.5	0.0	0.0	0.0	21.2	
26	09/08/	/2000	12:12	0.4	0.0	0.0	0.0	21,2	
27	09/08/	/2000	12:22	0.4	0.0	0.0	0.0	21.2	
28	09/08/	/2000	12:32	0.5	0.0	0.0	0.1	21.2	
29	09/08/	<b>2000</b>	12:42	0.5	0.0	0.0	0.0	21.2	
30	09/08/	2000	12:52	0.7	0.5	0.0	0.3	21.2	
31	09/08/	<b>2000</b>	13:02	0.9	0.6	0.1	0.4	21.2	
32	09/08/	2000	13:12	1.1	0.0	0.0	0.4	21.3	
33	09/08/	<b>′2000</b>	13:22	1.1	0.5	0.0	0.4	21.4	
	09/08/			1.2	1.0	0.0	0.4	21.5	
35	09/08/	2000	13:42	1.2	3.0	0.0	0.5	21.5	
36	09/08/	2000	13:52	1.2	5.6	0.0	0.6	21.5	
	09/08/	2000	14:02	1.3	3.2	0.0	0.5	21.6	
	09/08/			1.1	0.2	0.0	0.4	21.6	
	09/08/			1.0	0.1	0.0	0.4	21.6	
	09/08/			0.9	0.1	0.0	0.4	21.6	
	09/08/			1.1	0.0	0.0	0.4	21.6	
	09/08/			1.0	1.3	0.0	0.4	21.6	
	09/08/			1.0	0.1	0.0	0.3	21.6	
	09/08/			1.1	म्सिन्धः	<sub>1</sub> 0.0	0.3	21.6	
	09/08/			0.9	_ D.3 .	Ό.0	0.4	21.5	
	09/08/			1.0	0.5	0.0	0.4	21.5	
47	09/08/	2000	15:42	8.0	0.3	0.0	0.3	21.6	

48	09/08/2000	15:52	8.0	0.6	0.0	0.2	21.6
	09/08/2000		0.8	0.1	0.0	0.2	21.5
	09/08/2000		0.7	0.0	0.0	0.2	21.5

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754 User ID: AHIBBARD Site ID: E672 Data Points: 38 Data Type: Avg Sample Period: 600 sec Last Calibration Time: 09/11/2000 07:11 Start At: 09/11/2000 10:38 End At: 09/11/2000 16:48 Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) 200.0 High Alarm Levels: 100.0 20.0 20.0 23.5 Low Alarm Levels: 35.0 50.0 10.0 10.0 STEL Alarm Levels: 100.0 25.0 15.0 TWA Alarm Levels: 35.0 10.0 10.0 CO(ppm) VOC(ppm) H2S(ppm) Sensor: LEL(%) OXY(%) Peak Data Value: 1.9 3.7 21.7 0.0 0.0

21.0

\_

Min Data Value:

TWA Data Value: AVG Data Value:

0.3

0.9

1.1

0.0

0.4

0.0

0.0

0.3 / 0.0

0.0

Instrument: Multi-gas Monitor (PGM50-5P) User ID: AHIBBARD

Site ID: E672

Data Points: 38

Data Type: Avg

Sample Period: 600 sec

Serial Number: 504754

Last Calibration Time: 09/11/2000 07:11

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) 200.0 100.0 20.0 20.0 23.5 Gas Type:

High Alarm Levels:

Low Alarm Levels:	35.0	50.0	10.0	10.0	19.5				
						: <u> </u>			
Line# Date Time	CO(ppm)	VOC(pp	m) H2S(	(ppm)	LEL(%)	OXY(%)			
	······································			·	·····			· ·	
1 09/11/2000 10:38	0.4	0.0	0.0	0.0	21.0		<b>5</b>		
2 09/11/2000 10:48	0.6	0.0	0.0	0.0	21.0		4		
3 09/11/2000 10:58		0.0	0.0	0.0	21.1	1.	·		
4 09/11/2000 11:08		10.0	0.0	0.0	21.1				
5 09/11/2000 11:18		0.0	0.0	0.0	21.2				
6 09/11/2000 11:28		0.0	0.0	0.0	21.3	÷.			
7 09/11/2000 11:38		0.0	0.0	0.0	21.3				
8 09/11/2000 11:48		0.0	0.0	0.0	21.4				
9 09/11/2000 11:58		0.0	0.0	0.0	21.5			•	
10 09/11/2000 12:08		0.0	0.0	0.0	21.5				•
11 09/11/2000 12:18 12 09/11/2000 12:28		0.0	0.0	0.0	21.5				
13 09/11/2000 12:38		0.0	0.0 0.0	0.0 0.0	21.5 21.6				
14 09/11/2000 12:48		0.0 0.0	0.0	0.0	21.6				
15 09/11/2000 12:58		2.5	0.0	0.0	21.5			•	
16 09/11/2000 13:08		3.7	0.0	0.0	21.5				
17 09/11/2000 13:18		1.4	0.0	0.0	21.6				
18 09/11/2000 13:28		0.9	0.0	0.0	21.6				
19 09/11/2000 13:38		0.8	0.0	0.0	21.6				
20 09/11/2000 13:48		0.4	0.0	0.0	21.7				•
21 09/11/2000 13:58		0.4	0.0	0.0	21.6				
22 09/11/2000 14:08	1.5	0.4	0.0	0.0	21.6				
23 09/11/2000 14:18		0.3	0.0	0.0	21.6				
24 09/11/2000 14:28		0.4	0.0	0.0	21.6				
25 09/11/2000 14:38		0.5	0.0	0.0	21.5			•	
26 09/11/2000 14:48		0.4	0.0	0.0	21.6				
27 09/11/2000 14:58	1.0	0.3	0.0	0.0	21.6	•			
28 09/11/2000 15:08	-	0.3	0.0	0.0	21.6	•			
29 09/11/2000 15:18	1.0	0.3	0.0	0.0	21.6				
30 09/11/2000 15:28	1.0	0.2	0.0	0.0	21.6				
31 09/11/2000 15:38	0.9	0.2	0.0	0.0	21.6				
32 09/11/2000 15:48 33 09/11/2000 15:58	0.9	0.2	0.0	0.0	21.5				
34 09/11/2000 15:08	0.8	0.2	0.0	0.0	21.6				
35 09/11/2000 16:08 35 09/11/2000 16:18	0. <i>7</i> 0.8	0.1	0.0	0.0	21.6				
36 09/11/2000 16:18	0.8 0.5	0.2 0.1	0.0	0.0	21.6				
37 09/11/2000 16:38	0.5	0.1	0.0	0.0	21.6				
38 09/11/2000 16:48	0.4	0.0	0.0	0.0	21.5				
00 00/11/2000 10.40	0.3	U.U	0.0	0.0	21.5				

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754

User ID: AHIBBARD Site

Site ID: E672

Data Points: 34 Data Type: Avg Sample Period: 600 sec

Last Calibration Time: 09/12/2000 09:17

Start At: 09/12/2000 09:25 End At: 09/12/2000 14:55

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Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

High Alarm Levels: 200.0 100.0 20.0 20.0 23.5 10.0 15.0 10.0 35.0 50.0 Low Alarm Levels: 19.5 STEL Alarm Levels: ----100.0 25.0 TWA Alarm Levels: 10.0 35.0 10.0

-

Sensor: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

Peak Data Value: 0.0 0.0 0.0 21.1 0.0 Min Data Value: 0.0 0.0 0.0 0.0 20.8 0.0 TWA Data Value: 0.0 0.0 ----AVG Data Value: 0.0 0.0 0.0

==

48	09/08/2000 15:52	0.8	0.6	0.0	0.2	21.6
	09/08/2000 16:02		0.1	0.0	0.2	21.5
50	09/08/2000 16:12	0.7	0.0	0.0	0.2	21.5

Serial Number: 504754

User ID: AHIBBARD Data Points: 34

Site ID: E672 Data Type: Avg

Sample Period: 600 sec

Last Calibration Time: 09/12/2000 09:17

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Gas Type:

High Alarm L	_evels: evels:	200.0 35.0	100.0 50.0	20.0 10.0	20.0 10.0	23.5 19.5	)X1(%)			-	
				•				**************************************	yyy dalet vane vane alet viise di		
Line# Da	te Time =======	CO(ppm)	VOC(pp	III)	.pp:///	LEL(%)	OXY(%)				· ··· · · · · · · · · · · · · · · · ·
=											
1 09/12/2	2000 09:25	0.0	0.0	0.0	0.0	20.8					
2 09/12/2		0.0	0.0	0.0	0.0	20.9					
3 09/12/2		0.0	0.0	0.0	0.0	20.9					
4 09/12/2		0.0	10.0	0.0	0.0	20.9					
	2000 10:05	0.0	0.0	0.0	0.0	20.9			٠		
6 09/12/2		0.0	0.0	0.0	0.0	20.9	<b></b> ,				
7 09/12/2		0.0	0.0	0.0	0.0	20.9					
8 09/12/2		0.0	0.0	0.0	0.0	21.0	•				
9 09/12/2		0.0	0.0	0.0	0.0	21.0					
10 09/12/2			0.0	0.0	0.0	21.0					
11 09/12/2			0.0	0.0	0.0	21.0					
12 09/12/2		0.0	0.0	0.0	0.0	21.0					
13 09/12/2		0.0	0.0	0.0	0.0	21.0					
14 09/12/2		0.0	0.0	0.0	0.0	21.0					
15 09/12/2 16 09/12/2		0.0	0.0	0.0	0.0	21.0					
17 09/12/2		0.0	0.0 0.0	0.0 0.0	0.0 0.0	21.1 21.1					
18 09/12/2		0.0 0.0	0.0	0.0	0.0	21.1					
19 09/12/2		0.0	0.0	0.0	0.0	21.1					
20 09/12/2		0.0	0.0	0.0	0.0	21.1					
21 09/12/2		0.0	0.0	0.0	0.0	21.1					
22 09/12/2		0.0	0.0	0.0	0.0	21.1					
23 09/12/2		0.0	0.0	0.0	0.0	21.1					
24 09/12/2		0.0	0.0	0.0	0.0	21.1					
25 09/12/2		0.0	0.0	0.0	0.0	21.1				•	
26 09/12/2		0.0	0.0	0.0	0.0	21.1					
27 09/12/2		0.0	0.0	0.0	0.0	21.1					
28 09/12/2		0.0	0.0	0.0	0.0	21.1					
29 09/12/2	000 14:05	0.0	0.0	0.0	0.0	21.1					
30 09/12/2		0.0	0.0	0.0	0.0	21.1					
31 09/12/2		0.0	0.0	0.0	0.0	21.1					
32 09/12/2		0.0	0.0	0.0	0.0	21.1					
33 09/12/2		0.0	0.0	0.0	0.0	21.1					
34 09/12/2	000 14:55	0.0	0.0	0.0	0.0	21.1					

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754 User ID: AHIBBARD Site ID: E672 Data Points: 45 Data Type: Avg Sample Period: 600 sec Last Calibration Time: 09/13/2000 09:31 Start At: 09/13/2000 10:36 End At: 09/13/2000 17:56 CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Sensor: 200.0 100.0 20.0 20.0 23.5 High Alarm Levels: 10.0 Low Alarm Levels: 35.0 50.0 10.0 19.5 STEL Alarm Levels: 100.0 25.0 15.0 • ----TWA Alarm Levels: 35.0 10.0 10.0 CO(ppm) VOC(ppm) H2S(ppm) Sensor: LEL(%) **OXY(%)** Peak Data Value: 0.3 0.0 0.0 1.0 21.3

TWA Data Value: 0.0 0.0 1 0.0 ---- ---- AVG Data Value: 0.0 0.0 0.0 -----

20.8

=

Min Data Value:

0.0

0.0

0.0

0.0

Instrument: Multi-gas Monitor (PGM50-5P) User ID: AHIBBARD

Site ID: E672

Data Type: Avg Data Points: 43

Last Calibration Time: 09/16/2000 07:05

Serial Number: 504754

Sample Period: 600 sec

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) 200.0 100.0 20.0 20.0 23.5 Gas Type:

High Álarm Levels:

Low Alarm Levels:	35.0	50.0	10.0	10.0	19.5	·
	CO(ppm)	** *		,		OXY(%)
1 09/16/2000 07:56 2 09/16/2000 08:06 3 09/16/2000 08:16 4 09/16/2000 08:36 6 09/16/2000 08:36 6 09/16/2000 08:36 7 09/16/2000 08:56 8 09/16/2000 09:06 9 09/16/2000 09:16 10 09/16/2000 09:36 12 09/16/2000 09:36 13 09/16/2000 09:36 14 09/16/2000 10:06 15 09/16/2000 10:06 15 09/16/2000 10:36 8 09/16/2000 10:36 9 09/16/2000 10:36 10 09/16/2000 10:36 11 09/16/2000 10:36 12 09/16/2000 10:36 13 09/16/2000 10:36 14 09/16/2000 10:36 15 09/16/2000 10:36 16 09/16/2000 10:36 17 09/16/2000 10:36 18 09/16/2000 11:36 20 09/16/2000 11:36 20 09/16/2000 11:36 21 09/16/2000 11:36 22 09/16/2000 11:36 23 09/16/2000 11:36 24 09/16/2000 11:36 25 09/16/2000 12:36 30 09/16/2000 12:36 30 09/16/2000 12:36 31 09/16/2000 12:36 32 09/16/2000 13:36 33 09/16/2000 13:36 34 09/16/2000 13:36 35 09/16/2000 13:36 36 09/16/2000 13:36 37 09/16/2000 13:36 38 09/16/2000 13:56 38 09/16/2000 14:26 41 09/16/2000 14:26 41 09/16/2000 14:36 42 09/16/2000 14:36 42 09/16/2000 14:36		** *		,	20.9 20.9 20.9 21.0 21.1 21.1 21.1 21.1 21.1 21.2 21.2	

8/31/00	Realtime	- dust	monitorin	= hork	300
Instrument	Location			J	Reading
	Dw of	Joek	10adins		0.046 mg
Multi Rae		,	<u> </u>	VOC	'
				<u>LEL</u>	
-				H <sub>2</sub> S	
	ı			0	
Sibata		15	(/		0.045mg/
Multi Rae				VOC	
				LEL	
				H₂S	
				0	
Sibata		11	//		0.011 mg/a
Multi Rae				VOC	
				LEL	
				H <sub>2</sub> S	
				O	Â.:
Sibata		· · · · · · · · · · · · · · · · · · ·			
Multi Rae				VOC	
				LEL	*
				H <sub>2</sub> S	
					***************************************
Sibata	-				
Multi Rae				voc	
				LEL	
Sibata					
Multi Rae				voc	
		A STATE OF THE STA	the annual total control of the second secon	······	
	Instrument Sibata Multi Rae Sibata Multi Rae Sibata Multi Rae Sibata Multi Rae Sibata Multi Rae	Sibata  Multi Rae  Sibata  Multi Rae  Sibata  Multi Rae  Sibata  Multi Rae  Sibata  Multi Rae  Sibata  Multi Rae	Sibata  Multi Rae  Sibata  Multi Rae  Sibata  Multi Rae  Sibata  Multi Rae  Sibata  Multi Rae  Sibata  Multi Rae  Sibata  Multi Rae	Sibata  Multi Rae  / Sibata  Multi Rae  Sibata  Multi Rae  Sibata  Multi Rae  Sibata  Multi Rae  Sibata  Multi Rae  Sibata  Multi Rae	Instrument

DATE:	9/4/00	Real time Dist monitoring	
Time	Instrument	Location .	Reading
0809	Sibata	Work zone Drom Area A Dw of Exogration VOC	O. oolans
,	Multi Rae	Dw of Exacution VOC	
		LEL	
	-	$H_2S$	
		, 0	
0951	Sibat <b>a</b>	N //	0.00 mg/2
	Multi Rae	VOC	
		LEL	
		H <sub>2</sub> S	
		0	
1310	Sibata	ts /·	0.0 18mg/-
	Multi Rae	VOC	
		LEL	
		$H_2S$	
		O	
	Sibata		
	Multi Rae	VOC	
		LEL .	
		H <sub>2</sub> S	
		O	
·	Sibata		<u> </u>
	Multi Rae	VOC	
		LEL	
		H <sub>2</sub> S	
		0	
	Sibata		
	Multi Rae	VOC	
		H <sub>2</sub> S	
		O	

DATE:	9/14/00	Pea	1tine	Dust mon.	toring	
Time	Instrument	Location	Work	Dust mon.	- Arrent A	Reading
0654	Sibata	Dw of	<u>exc</u>	-at-va		0.020ng/m
	Multi Rae		-		VOC	2
	-   `				H <sub>2</sub> S	\$
					0	
1332	Sibata	Dwof	2X2	javahon.		0.032mg]
	Multi Rae				VOC	7.5
						1.0
			_		H₂S	
					0	
1505	Sibata	Dw of	<u>es</u>	ruation		0.029m
	Multi Rae				VOC	1
					LEL.	
	( Section 1				: H₂S	
					Ō	
	Sibata	· · · · · · · · · · · · · · · · · · ·		<u></u>		
	Multi Rae				VOC	
				4	LEL	
-					H <sub>2</sub> S	
			***************************************		Ō	
·	Sibata					· ·
	Multi Rae				VOC	
		Marie (1944)	<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>		LEL	
			**************************************		H <sub>2</sub> S	
		**************************************	<del></del>		O	
	Sibata	***************************************				
	Multi Rae .		ne en labla		voc	- 33
*		· · · · · · · · · · · · · · · · · · ·			LEL	
			(*************************************		H <sub>2</sub> S	
		<u> </u>			0	
		**************************************				

Serial Number: 504754

User ID: AHIBBARD Data Points: 29 Site 1D: E672

Data Type: Avg

Sample Period: 600 sec

Last Calibration Time: 09/18/2000 07:21

Gas Type: High Alarm Levels: Low Alarm Levels:	CO(ppm) \ 200.0 35.0	/OC(pp 100.0 50.0	m) H · 20 10.	0.0 20.	0 23.	5
Line# Date Time	CO(ppm)	VOC(	opm)	H2S(ppr	n) LEL	 (%) OXY(%)
1 09/18/2000 10:00 2 09/18/2000 10:10	0.3 0.3	0.0 0.0	0.0	0.0 0.1	21.1 21.1	Bio Cell
1 09/18/2000 11:00 2 09/18/2000 11:10 3 09/18/2000 11:20 4 09/18/2000 11:30 5 09/18/2000 11:40	0.3 0.3 0.3 0.5 0.8	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.1 0.3 1.1 1.4	21.1 21.1 21.2 21.1 21.2	Drum Area A
6 09/18/2000 11:50 7 09/18/2000 12:00 8 09/18/2000 12:10 9 09/18/2000 12:20 10 09/18/2000 12:30	1.0 1.3 1.5 1.6	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	1.7 1.9 2.0 2.0 2.2	21.2 21.3 21.3 21.4 21.4	
1 09/18/2000 12:48 2 09/18/2000 12:58 3 09/18/2000 13:08 4 09/18/2000 13:18 5 09/18/2000 13:28 6 09/18/2000 13:38 7 09/18/2000 13:48 8 09/18/2000 13:58 9 09/18/2000 14:08 10 09/18/2000 14:18	0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.1 0.2 0.2	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	20.9 20.8 20.8 20.7 20.7 20.7 20.8 20.8 20.8 20.8	Drum Area A
1 09/18/2000 15:32 2 09/18/2000 15:42 3 09/18/2000 15:52 4 09/18/2000 16:02 5 09/18/2000 16:12 6 09/18/2000 16:22 7 09/18/2000 16:32	0.0 0.0 0.0 0.0 0.0	0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0	20.8 20.7 20.7 20.6 20.6 20.6 20.6 20.6	Drum Area A

Serial Number: 504754

User ID: AHIBBARD

Site ID: E672

Sample Period: 600 sec

Data Points: 19 Data Type: Avg Last Calibration Time: 09/19/2000 07:45

Ld	Last Calibration Time: 09/19/2000 07:45											
Hi	as Type: gh Alarm Levels: w Alarm Levels:	CO(ppm) V 200.0 35.0	OC(ppr 100.0 50.0	n) H 20 10.	0.0	LEL(%) 23.5 19.5	OXY(%)					
	ne# Date Time   09/19/2000 08:31   09/19/2000 08:41	CO(ppm) 0.0 0.0	VOC(p 0.0 0.0	0.0 0.0 0.0	H2S(ppr	n) LEL(%) 21.0 21.0	OXY(%) Bio Cell					
1 2 3 4 5	3 09/19/2000 09:51 09/19/2000 10:01	0.0 0.0 0.0 0.0 0.0	*0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0		20.9 21.0 21.0 21.0 21.0	Debris Area					
1 2 3 4 5	09/19/2000 11:34 09/19/2000 11:44 09/19/2000 11:54	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0		20.8 20.8 20.9 20.9 20.9 20.9 20.9	Debris Area					
1 2 3 4 5 6 7 8	09/19/2000 13:18 09/19/2000 13:28 09/19/2000 13:38 09/19/2000 13:48 09/19/2000 13:58 09/19/2000 14:08 09/19/2000 14:18 09/19/2000 14:28	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0		20.8 20.9 20.9 20.9 20.9 20.9 21.0 21.0	Debris Area					

User ID: AHIBBARD

Site ID: E672

Serial Number: 504754

Data Points: 21

Data Type: Avg

Sample Period: 600 sec

Last Calibration Time: 09/20/2000 07:26

Gas Type: High Alarm Levels: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) 100.0 20.0 200.0

OXY(%) 23.5

Low Alarm Levels:

35.0 50.0

20.0 10.0 10.0

19.5

4	

===					====			
Line	# Date	Time	CO(ppm)	VOC(	ppm)	H2S(ppm	) LEL(%)	OXY(%)
1	09/20/2000	09:21	0.1	0.0	0.0	0.0	20.9	. un vo un un un un u u un m un
2	09/20/2000	09:31	0.0	0.0	0.0	0.0	20.9	
3	09/20/2000	09:41	0.0	6.0	0.0	0.0	20.8	
4	09/20/2000	09:51	0.0	0.0	0.0	0.0	20.8	
5	09/20/2000	10:01	0.0	0.0	0.0	0.0	20.7	
6	09/20/2000	10:11	0.0	0.0	0.0	0.0	20.7	
7	09/20/2000	10:21	0.0	0.0	0.0	0.0	20.7	•
8	09/20/2000	10:31	0.0	0.0	0.0	0.0	20.6	
9	09/20/2000	10:41	0.0	0.0	0.0	0.0	20.6	
10	09/20/2000	10:51	0.0	0.0	0.0	0.0	20.6	
11	09/20/2000	11:01	0.0	0.0	0.0	0.0	20.6	
12	09/20/2000	11:11	0.0	0.0	0.0	0.0	20.6	
13	09/20/2000	11:21	0.0	0.0	0.0	0.0	20.7	,
14	09/20/2000	11:31	0.0	0.0	0.1	0.0	20.6	
15	09/20/2000	11:41	0.0	0.0	0.1	0.0	20.7	
16	09/20/2000	11:51	0.2	0.0	0.2	0.0	20.7	
17	09/20/2000	12:01	0.7	0.0	0.2	0.0	20.8	
18	09/20/2000	12:11	1.4	0.0	0.2	0.0	20.8	•
19	09/20/2000	12:21	1.9	0.0	0.1	0.0	20.9	
20	09/20/2000	12:31	2.3	0.0	0.1	0.0	20.9	
21	09/20/2000	12:41	24	0.0	0.0	0.0	21.0	

Serial Number: 504754

User ID: AHIBBARD

Data Points: 15

Site ID:

E672

Sample Period: 600 sec

Last Calibration Time: 09/21/2000 08:17

Gas Type:

CO(ppm) VOC(ppm) H2S(ppm) OXY(%) LEL(%)

High Alarm Levels:

200.0 100.0 20.0

20.0

23.5

Low Alarm Levels: 35.0 50.0 10.0 10.0 19.5

Data Type: Avg

	r /ugiiii Lorcio.					13.0	
Line	e# Date Tim	e CO(ppm)	) VOC	(ppm)	H2S(ppm	) LEL(%)	OXY(%)
1	09/21/2000 09:0	)5 1.2	0.0	0.0	0.0	20.9	
2	09/21/2000 09:	1.5	0.0	0.0	0.0	20.9	
3	09/21/2000 09::	25 2.1	60.0	0.0	0.1	20.9	
4	09/21/2000 09:3	35 2.6	0.0	0.0	0.4	20.9	
5	09/21/2000 09:4	5 3.2	0.0	0.0	0.7	20.9	
6	09/21/2000 09:5	5 3.7	0.0	0.0	1.0	21.0	
7	09/21/2000 10:0	3.7	0.0	0.0	0.5	21.1	
8	09/21/2000 10:1	5 3.8	0.0	0.0	0.6	21.1	
9	09/21/2000 10:2	25 4.0	0.0	0.0	1.0	21.1	•
10	09/21/2000 10:	35 3.8	0.0	0.0	0.6	21.2	
11	09/21/2000 10:	<b>45</b> 3.2	0.0	0.0	0.1	21.2	
12	09/21/2000 10:	55 2.8	0.0	0.0	0.0	21.2	
13	09/21/2000 11:	05 2.4	0.0	0.0	0.0	21.2	
14	09/21/2000 11:	15 2.0	0.0	0.0	0.0	21.2	
15	09/21/2000 11:3	25 1.7	0.0	0.0	0.0	21.1	

User ID: AHIBBARD Site ID: E672

Data Points: 45 Data Tr

Data Type: Avg Sample Period: 600 sec

Last Calibration Time: 09/25/2000 08:24

Serial Number: 504754

Gas Type: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

 High Alarm Levels:
 200.0
 100.0
 20.0
 —
 23.5

 Low Alarm Levels:
 35.0
 50.0
 10.0
 —
 19.5

LOW.	Alann Leve	515. 	35.0	50.0	1V. ————		15.	.0		 	
Line	# Date	Time	CO(ppm)		opm)		n) L	· •			
	09/25/2000			. 0.0	0.0		21.1				
2	09/25/2000	10:07	0.0	0.0	0.0		21.0				
3 (	09/25/2000	10:17	0.0	0.0	0.0		21.0				
4 (	09/25/2000	10:27	0.0	0.0	0.0		21.0				
5 (	09/25/2000	10:37	0.0	0.0	0.0	· 	21.0				
6 (	09/25/2000	10:47	0.0	0.0	0.0		21.0				
7 (	09/25/2000	10:57	0.0	0.0	0.0		21.0				
8 (	09/25/2000	11:07	0.0	0.0	0.0		21.0				
	09/25/2000		0.0	0.0	0.0		21.0				
	09/25/2000		0.0	0.0	0.0		21.0				
	09/25/2000		0.0	0.0	0.0		21.0				
	09/25/2000		0.0	0.0	0.0	<del></del>	20.9				
	09/25/2000		0.0	0.0	0.0		21.0				
	09/25/2000		0.0	0.0	0.0		21.0				
	09/25/2000		0.0	0.0	0.0		21.0				
	09/25/2000		0.0	0.0	0.0	***************************************	21.1				
	09/25/2000		0.0	0.0	0.0		21.1				
	09/25/2000		0.0	0.0	0.0		21.1				
	09/25/2000		0.0	0.0	0.0		21.1				
	09/25/2000		0.0	0.0	0.0		21.1				
	09/25/2000		0.0	0.0	0.0		21.1		•		
•	09/25/2000 09/25/2000		0.0	0.0	0.0	<del></del> .	21.1				
	09/25/2000		0.0 0.0	0.0 0.0	0.0		21.1 21.0				
	09/25/2000		0.0	0.0	0.0		21.0				
	09/25/2000		0.0	0.0	0.0		21.1				•
	09/25/2000		0.0	0.0	0.0		21.1				
	09/25/2000		0.0	0.0	0.0		21.1				
	09/25/2000		0.0	0.0	0.0		21.1				
	09/25/2000		0.0	0.0	0.0		21.1				
	09/25/2000		0.0	0.0	0.0	***************************************	21.2				
	09/25/2000		0.0	0.0	0.0		21.1				
	09/25/2000		0.0	0.0	0.0		21.1			·	
	9/25/2000		0.0	0.0	0.0		21.1				
	09/25/2000		0.0	0.0	0.0		21.1				
	9/25/2000		0.0	0.0	0.0		21.1				
	9/25/2000		0.0	0.0	0.0	***************************************	21.1				
38 0	9/25/2000	16:07	0.0	0.0	0.0	<del></del>	21.1				
39 O	9/25/2000	16:17	0.0	0.0	0.0		21.1				
40 0	9/25/2000	16:27	0.0	0.0	0.0		21.1				



41	09/25/2000 16:37	0.0	0.0	0.0		21.1
42	09/25/2000 16:47	0.0	0.0	0.0		21.1
43	09/25/2000 16:57	0.0	0.0	0,0	<u></u> -	21.0
44	09/25/2000 17:07	0.0	0.0	0.0		21.0
45	09/25/2000 17:17	0.0	0.0	0.0	<del></del>	21.0

### DAILY FIELD MONITORING RESULTS

Time	9/25/00 Instrument	leating Air Monitoring in lis	repre	Reading
	Sibata	Dw of excavation		0.009mg
1031	Multi Rae	DW OF EXCAURTS	Voc	U.OU MS
	Traditi rac		LEL	
			H <sub>2</sub> S	
	`	f	0	
1449	Sibata	Dw of excelation		D. DII mg
-(	Multi Rae		VOC	
			LEL	
			H <sub>2</sub> S	
, , , , , , , , , , , , , , , , , , ,			0	
	Sibata			
	Multi Rae		VOC	
			LEL	
			H <sub>2</sub> S	
			0	
	Sibata			
	Multi Rae		VOC	
			<u>LEL</u>	
			H <sub>2</sub> S	
			0	
	Sibata			
	Multi Rae		VOC	
			LEL	
			H <sub>2</sub> S	
			0	
	Sibata			
· · · · · · · · · · · · · · · · · · ·	Multi Rae		VOC	
			<u>LEL</u>	
····			H <sub>2</sub> S	
·			0	

Instrument: Multi-gas Monitor (PGM50-5P)

Serial Number: 504754

User ID: AHIBBARD

Site ID: E672

Data Points: 30

Data Type: Avg

Sample Period: 600 sec

Last Calibration Time: 09/27/2000 11:14

Gas Type:

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

High Alarm Levels:

200.0 100.0

20.0 23.5

Low	Alam Leve	ls:	35.0	50.0	10.		19	.5			
Line	# Date	Time	CO(ppm)	VOC(p	pm)	H2S(ppm				 	
1	09/27/2000		0.0	0.0	0.0		20.8				
2	09/27/2000	11:29	0.0	0.0	0.0		20.9				
3	09/27/2000	11:39	0.0	0.0	0.0		20.9				
4	09/27/2000	11:49	0.0	0.0	0.0		20.9				
5	09/27/2000	11:59	0.0	0.0	0.0		21.0				
6	09/27/2000	12:09	0.0	0.0	0.0		21.0				
7	09/27/2000	12:19	0.0	0.0	0.0		21.0				
8	09/27/2000 1	12:29	0.0	0.0	0.0	<del></del>	21.0				
9	09/27/2000	12:39	0.0	0.0	0.0		21.1				
10	09/27/2000	12:49	0.0	0.0	0.0		21.1				
11	09/27/2000	12:59	0.0	0.0	0.0	-	21.1				
12	09/27/2000	13:09	0.0	0.0	0.0		21.1				
13	09/27/2000		0.0	0.0	0.0		21.1		•		
14	09/27/2000	13:29	0.0	0.0	0.0	-	21.1				
15	09/27/2000		0.0	0.0	0.0		21.1				
16	09/27/2000		0.0	0.0	0.0	<del></del>	21.1				
17	09/27/2000		0.0	0.0	0.0		21.1				
18	09/27/2000		0.0	0.0	0.0		21.1				
19	09/27/2000		0.0	0.0	0.0		21.1				
	09/27/2000		0.0	0.0	0.0		21.1				
21	09/27/2000		0.0	0.0	0.0		21.1				
22	09/27/2000		0.0	0.0	0.0		21.1				
23	09/27/2000		0.0	0.0	0.0		21.1				
24	09/27/2000		0.0	0.0	0.0		21.1				
	09/27/2000		0.0	0.0	0.0		21.1				
	09/27/2000		0.0	0.0	0.0		21.1				
	09/27/2000		0.0	0.0	0.0	***************************************	21.1				
	09/27/2000 1		0.0	0.0	0.0		21.1				
	09/27/2000 1		0.0	0.0	0.0		21.1				
30	09/27/2000 1	16:09	0.0	0.0	0.0	-	21.1				

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 50475

User ID: AHIBBARD

44 09/28/2000 15:20

45 09/28/2000 15:30

46 09/28/2000 15:40

47 09/28/2000 15:50

Site ID:

Data Points: 50 Data Type: Avg Sample Period: 600 sec Last Calibration Time: 09/28/2000 08:07 Gas Type: CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(% High Alarm Levels: 200.0 100.0 20.0 23.5 Low Alarm Levels: 35.0 50.0 10.0 19.5 CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(% Line# Date Time 1 09/28/2000 08:10 0.0 0.0 0.0 20.8 2 09/28/2000 08:20 0.0 0.0 0.0 .... 20.9 3 09/28/2000 08:30 0.0 0.0 0.0 20.9 .... 4 0.0 4 09/28/2000 08:40 0.0 0.0 20.9 09/28/2000 08:50 0.0 0.0 0.0 20.9 -----6 09/28/2000 09:00 0.0 0.0 0.0 20.9 7 09/28/2000 09:10 0.0 0.0 0.0 20.9 8 09/28/2000 09:20 0.0 0.0 0.0.... 20.9 9 09/28/2000 09:30 0.0 0.0 0.0 20.5 10 09/28/2000 09:40 0.0 0.0 0.0 ----20.9 11 09/28/2000 09:50 0.0 0.0 0.0 20.9 ----12 09/28/2000 10:00 0.0 0.0 0.0 20.9 13 09/28/2000 10:10 0.0 0.0 0.0 20.9 ----14 09/28/2000 10:20 0.0 0.0 0.0 . . . . . 20.9 15 09/28/2000 10:30 0.0 0.0 0.020.9 16 09/28/2000 10:40 0.0 0.0 0.0 20.9 . . . . . 17 09/28/2000 10:50 0.0 0.0 0.0 ..... 21.1 18 09/28/2000 11:00 0.0 0.0 0.0 21.J 19 09/28/2000 11:10 0.0 0.0 0.0 21.1 20 09/28/2000 11:20 0.0 0.0 0.0 21.1 21 09/28/2000 11:30 0.0 0.0 0.0 ----21.1 22 09/28/2000 11:40 0.0 0.0 0.0 21.1 23 09/28/2000 11:50 0.0 0.0 0.0 21.1 24 09/28/2000 12:00 0.0 0.0 0.0 21.2 . - - - -25 09/28/2000 12:10 0.0 0.00.0 21.1 26 09/28/2000 12:20 0.0 0.0 0.0 21.1 27 09/28/2000 12:30 0.0 0.0 0.0 ..... 21.1 28 09/28/2000 12:40 0.0 0.0 0.0 21.1 29 09/28/2000 12:50 0.0 0.0 0.0 21.1 30 09/28/2000 13:00 0.0 0.0 0.0 ----21.J 31 09/28/2000 13:10 0.0 0.0 0.0 21.1 32 09/28/2000 13:20 0.0 0.0 0.0 21.1 33 09/28/2000 13:30 0.0 0.0 0.0 \*\*\*= 21.J 34 09/28/2000 13:40 0.0 0.0 0.0 21.1 35 09/28/2000 13:50 0.0 0.0 0.0 .... 21.1 36 09/28/2000 14:00 0.0 0.0 0.0 ----21.1 37 09/28/2000 14:10 0.0 0.0 0.0 21.1 38 09/28/2000 14:20 0.0 0.0 0.0 .... 21.1 39 09/28/2000 14:30 0.0 21.2 0.0 0.0 .... 40 09/28/2000 14:40 0.0 0.0 0.0 .... 21.3 41 09/28/2000 14:50 0.0 0.0 0.0 .... 21.3 42 09/28/2000 15:00 0.0 0.0 0.0 21.3 . . . . . 43 09/28/2000 15:10 0.0 0.0 0.0 21.3 . - - - -

10.0

0.0

0.0

0.0

....

....

....

21.3

21.3

21.3

21.2

P 40.0

0.0

0.0

0.0

0.0

0.0

0.0

48	09/28/2000 10	6:00	0.0	0.0	0.0		21.2
49	09/28/2000 10	6:10	0.0	0.0	0.0	****	21.2
50	09/28/2000 10	6:20	0.0	0.0	0.0		21.2

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 50475 User ID: AHIBBARD Site ID: E672 Data Points: 50 Data Type: Avg Sample Period: 600 sec Last Calibration Time: 09/28/2000 08:07 Start At: 09/28/2000 08:10 End At: 09/28/2000 16:20 CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(% Sensor: High Alarm Levels: 200.0 100.0 20.0 ..... 23.5 35.0 Low Alarm Levels: 50.0 10.0 19.5 STEL Alarm Levels: 100.0 25.0 15.0 TWA Alarm Levels: 35.0 10.0 10.0 CO(ppm) VOC(ppm) H2S(ppm) Sensor: LEL(%) OXY(% Peak Data Value: 0.0 0.0 0.0 -----21.3 0.0 Min Data Value: 0.0 0.0 20.8 TWA Data Value: 0.0 0.0 / 0.0 0.0 AVG Data Value: 0.0 0.0

Page: 1

### DAILY FIELD MONITORING RESULTS

Time	p/z/00 R Instrument	Location Debas Area (Dw)	Reading
1102	Sibata		0.010mg
<u>-1-1</u>	Multi Rae	VOC	7
		LEL	·
		$H_2S$	
	-	, 0	
1110	Sibata	Dwof truck loading	0.021
	Multi Rae	VOC	<u> </u>
	······	LEL	
		H <sub>2</sub> S	
<del></del>		O	
348	Sibata	Dw of workzone in Deloris Area	0.007m
	Multi Rae	VOC	4
		LEL	
		H <sub>2</sub> S	
		0	
	Sibata		
	Multi Rae	VOC	
		LEL	
		H <sub>2</sub> S	
		0	
	Sibata		
	Multi Rae	VOC	
		LEL	
		H <sub>2</sub> S	
		0	
	Sibata		
	Multi Rae	VOC	
		LEL	
		H <sub>2</sub> S	
		0	

Instrument: Multi-gas Monitor (PGM50-5P) Serial Number: 504754 se User ID: AHIBBARD Site ID: E672 Data Points: 14 Data Type: Avg Sample Period: 600 sec Last Calibration Time: 11/01/2000 09:18 ----CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Gas Type: 200.0 100.0 20.0 20.0 23.5 High Alarm Levels: ₩, Low Alarm Levels: 35.0 50.0 10.0 10.0 19.5 CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) Line# Date Time 1 11/01/2000 14:23 0.0 0.0 20.8 0.0 0.0 0.0 0.0 0.0 20.8 2 11/01/2000 14:33 0.0 1 3 11/01/2000 14:43 0.0 f 0.0 0.0 0.0 20.8 11 4 11/01/2000 14:53 0.0 0.0 0.0 0.0 20.7 5 11/01/2000 15:03 0.0 0.0 0.0 0.0 20.7 2.9 6 11/01/2000 15:13 0.0 0.0 0.0 20.8 11 7 11/01/2000 15:23 0.0 3.4 0.0 0.0 20.7 8 11/01/2000 15:33 0.0 11.1 0.0 0.0 20.7 9 11/01/2000 15:43 0.0 3.3 0.0 0.0 20.7 11 2.4 0.0 20.6 10 11/01/2000 15:53 0.0 0.0 11 11/01/2000 16:03 0.0 1.4 0.0 0.0 20.6 12 11/01/2000 16:13 0.0 1.6 0.0 0.0 20.6 10 13 11/01/2000 16:23 0.0 4.1 0.0 0.0 20.6 14 11/01/2000 16:33 0.0 5.4 0.0 0.0 20.6 15 11/01/2000 16:46 0.3 0.0 0.0 0.0 20.8 10 16 11/01/2000 16:56 0.3 0.0 0.0 0.0 20.8 10 17 11/01/2000 17:06 0.4 0.0 0.0 20.8 0.1 18 11/01/2000 17:16 0.4 0.0 0.1 0.0 20.8 10 0

0/

D/I

)/C 1/0

1/0 1/0

/U\ /0!

Oξ

Test pit excavation

4	10/09/2000 15:47	0.0	0.0	0.0		20.3		
42	10/09/2000 15:57	0.0	0.0	0.0		20.4		
43	3 10/09/2000 16:07	0.0	0.0	0.0		20.3		
44	10/09/2000 16:17	0.0	0.0	0.0		20.4		
45	10/09/2000 16:27	0.0	0.0	0.0	-	20.4		
48	10/09/2000 16:37	0.0	0.0	0.0		20.3		
47	10/09/2000 16:47	0.0	0.0	0.0		20.3		
48	10/09/2000 16:57	0.0	0.0	0.0		20.3		
49	10/09/2000 17:07	0.0	0.0	0.0		20.3		
50	10/09/2000 17:17	0.0	0.0	0.0	-	20.3		
51	10/09/2000 17:27	0.0	0.0	0.0		20.3		
52	10/09/2000 17:37	0.0	0.0	0.0		20.3		
							•	
			•					

-

Instrument: Multi-gas Monitor (PGM50-5P)

Site ID: E672

Serial Number: 504754

User ID: AHIBBARD

Data Points: 15

Data Type: Avg

Sample Period: 600 sec

Last Calibration Time: 11/02/2000 07:15

Gas Type:

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%)

High Alarm Levels:

200.0 100.0 20.0

50.0

20.0 23.5

Low Alarm Levels:

35.0

10.0 10.0

19.5

TOM	V Alami Leve	'IS. 	35.0	5U.U	10.	0 10.0	19.5	
 Line	# Date	Time	CO(ppm)	VOC(p	pm)	H2S(ppm	) LEL(%	) OXY(%)
1	11/02/2000	07:50	0.0	0.0	0.0	0.0	21.0	
2	11/02/2000	08:00	0.0	1.8	0.0	0.0	20.9	·
3	11/02/2000	08:10	0.0	0.1	0.0	0.0	20.9	
4	11/02/2000	08:20	0.0	0.0	0.0	0.0	20.8	
5	11/02/2000	08:30	0.0	0.0	0.0	0.0	20.7	Test pit excavation
6	11/02/2000	08:40	0.0	0.0	0.0	0.0	20.7	
7	11/02/2000 (	08:50	0.0	0.0	0.0	0.0	20.7	
8	11/02/2000 (	09:00	0.0	0.0	0.0	0.0	20.7	
9	11/02/2000 (	09:10	0.0	0.0	0.0	0.0	20.7	
10	11/02/2000	09:20	0.0	0.0	0.0	0.0	20.7	
11	11/02/2000	09:30	0.0	0.0	0.0	0.0	20.8	
12	11/02/2000	09:40	0.0	0.0	0.0	0.0	20.7	
13	11/02/2000	09:50	0.0	0.0	0.0	0.0	20.8	
14	11/02/2000	10:00	0.0	0.0	0.0	0.0	20.8	
15	11/02/2000	10:10	0.8	0.0	0.0	0.0	20.9	

Instrument: Multi-gas Monitor (PGM50-5P)

Site ID: E672

Serial Number: 504754

User ID: AHIBBARD

Data Points: 21

Data Type: Avg

Sample Period: 600 sec

Last Calibration Time: 11/05/2000 09:41

Gas Type:

CO(ppm) VOC(ppm) H2S(ppm) LEL(%) OXY(%) 23.5

High Alarm Levels: Low Alarm Levels:

200.0 100.0 20.0 20.0 35.0 50.0 10.0

10.0 19.5

<b>==</b>				====				
Line	# Date			-			) LEL(%)	
1	11/06/2000		0.0	0.0	0.0	0.0	20.7	~
2	11/06/2000	15:43	0.0	0.0	0.0	0.0	20.5	
3	11/06/2000	15:53	0.0	0.0	0.0	0.0	20.4	
4	11/06/2000	16:03	0.2	0.0	0.0	0.0	20.4	
5	11/06/2000	16:13	0.7	0.0	0.0	0.0	20.4	Bio-cell excavation
6	11/06/2000	16:23	1.2	0.0	0.0	0.0	20.4	
7	11/06/2000	16:33	1.7	0.0	0.0	0.0	20.3	
8	11/06/2000	16:43	2.2	0.0	0.0	0.0	20.4	
9	11/06/2000	16:53	2.7	0.0	0.0	0.0	20.4	
10	11/06/2000	17:03	2.7	0.0	0.0	0.0	20.4	
11	11/06/2000	17:13	2.5	0.0	0.0	0.0	20.5	
12	11/06/2000	17:23	2.4	0.0	0.0	0.0	20.4	,
13	11/06/2000	17:33	2.3	0.0	0.0	0.0	20.4	
14	11/06/2000	17:43	2.1	0.0	0.0	0.0	20.4	
15	11/06/2000	17:53	2.0	0.0	0.0	0.0	20.4	
16	11/06/2000	18:03	1.9	0.0	0.0	0.0	20.4	
17	11/06/2000	18:13	1.7	0.0	0.0	0.0	20.4	
18	11/06/2000	18:23	1.6	0.0	0.0	0.0	20.4	
19	11/06/2000	18:33	1.9	0.0	0.0	0.0	20.4	
20	11/06/2000	18:43	1.5	0.0	0.0	0.0	20.4	·
21	11/06/2000	18:53	1.2	0.0	0.0	0.0	20.4	

DATE: 8/9/00		
HYGIENIST: Alan	Hibbard	
HNU Model # : Serial # :	RAE Model #: PSM50 Scrial #:504754	RAE Model # : Serial # :
Lamp type :eV	Lamp type : 10 - 6 eV	Lamp type :eV
Background:ppm '	BG: VOC O.O ppm	BG: VOCppm
	H2S O ppm	H2Sppm
	LEL%	LEL%
	СО О ррлп	CO ppm
	02 <u>20-9</u> %	O2%
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS
[ 100 ppm Isobutylene [ 10 ppm Hydrogen Sulfide [ 160 ppm Carbon Monoxide [ 145% Methane 2.5% [ 15% Oxygen 20-9%	Automaric	
OXYGEN METER/EXPLOSI	METER	
Model #: Scrial #:	Back	ground:
	_	Fppm
	•	ppson
	-	=%
SIBATA Model #: PCD-1 Script #: PG 9 1210		
Background = $O.O!2$ mg/m <sup>3</sup>		STATE OF THE PARTY
Sensitivity 50	Standard	

DATE: \$110 60		
HYGIENIST: Adam 1	4,6bard	
HNU Model # : Scrial # :	RAE Model #: PGM 50-5P Serial #: 504754	RAE Model #: Serial #:
Lamp type:eV	Lamp type: 10.6 eV	Lamp type :eV
Background:ppm	BG: VOC O.O ppm	BG: VOCppm
	H2S O ppm	H2S ppm
	LEL O %	LEL%
	СО О рргл	COppun
	02 20.9%	02%
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS
[1] 100 ppm Isobutylene [1] 10 ppm Hydrogen Sulfide [1] 60 ppm Carbon Monoxide [1] 145% Methane 2.5 [1] 15% Oxygen 25.9	Automaric	
OXYGEN METER/EXPLOSI		
Model #: Serial #:	. Back Oʻ =	ground:
·	CO:	*ppm
• .	H <sub>2</sub> S	<u> </u>
	LEL	=%
SIBATA Model #: PCD-1 Serial #: 069/210		
Background = O. O. 9 mg/m		
		·
Serve GD		· 

DATE: 8 15100		
HYGIENIST: Adam H	bord	
HNU Model # : Serial # :	RAE Model #: PGM50 Serial #: 504757	RAE Model #: Serial #:
Lamp type:eV	Lamp type : 10.6 eV	Lamp typeeV
Background:ppm	BG: VOC O.O ppm	BG: VOCppm
	H2S ppm	H2Sppm
	LEL	LEL%
·	СОрргл	COppm
	02 20.9 %	02%
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS
[1] 100 ppm Isobutylene [1] 10 ppm Hydrogen Sulfide [1] 60 ppm Carbon Monoxide [1] 145% Methane 2.5% [1] 18% Oxygen 20.9%	Automaric	
OXYGEN METER/EXPLOSI	METER	
Model #: Scrial #:	······	ground:
	co-	ppm
	H <sub>2</sub> S :	=ppm
	LEL	= <u>%</u>
SIBATA Model #: Scrial #:		
Background = 0.015 mg/m		
CALTRACTOR PERSONAL CLASS		-

DATE: 8/1600			
HYGIENIST: Alam Hil	bbard		
HNU Model # : Scrial # :	RAE Model #: # PGM50 Serial #: 504754	RAE Model # : Serial # :	
Lamp type :eV	Lamp type: 10.6 eV	Lamp type	_eV
Background:ppm	BG: VOC 0,0 ppm	BG: VOC	<b>Tpbm</b>
	H2S O ppm	H2S	bbus
	LEL 0 %	LEL	%
	СО О ррпп	co	ppm _
	02 <u>20.9</u> %	02	<b>%</b>
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS	
[9] 100 ppm Isobutylene [1] 10 ppm Hydrogen Sulfide [2] 60 ppm Carbon Monoxide [3] 145% Methane 2.5 [4] 15% Oxygen 20.9	Automaric		
OXYGEN METER/EXPLOSI	METER		
Model #: Serial #:		ground:	*** 4
	CO*	ppm	
		= pom	
•	-		
SIBATA Model #: Serial #:			
Background = $0.003$ mg/m <sup>3</sup>			
BALTNICORPITORNISTICLL DATA			

### DAILY CALIBRATION DATA DATE: KI/100 Adan Hibbard HYGIENIST: HNU RAE RAE Model #: Model #: Model #: Serial #: Serial #: Serial #: Lamp type: 10.6 eV Lamp type :\_ Lamp type :\_\_\_\_eV BG: VOC O, O ppm Background: ppm BG: VOC ppm HDS ppm H2S ppm LEL Ø % LEL \_\_\_ % СО 💆 ррт CO \_\_\_\_ppin 02 70.9 % O2 \_\_\_\_\_% SPAN GAS CONCENTRATION SPAN ADJUSTMENT COMMENTS 100 ppm Isobutylene 10 ppm Hydrogen Sulfide 60 ppm Carbon Monoxide Automatic 1.55% Methane 2.5% 15% Oxygen Zo.7% OXYGEN METER/EXPLOSIMETER Model #: Serial #: CO = \_\_\_\_ppm H<sub>2</sub>S = \_\_\_\_\_ppm LEL = \_\_\_\_ % SIBATA Model #: Serial #: Background = 0.000 mg/m<sup>2</sup>

	ILY CALIBRATION I	DATA
DATE: 8 1221 00		
HYGIENIST: Ala-	H. bband	
HNU Model #: PLID1 Scriel #: /	RAE Model #: Scrial #: 504754	RAE Model #: Serial #:
Lamp type : 10.6 eV	Lamp type : 10 - 6 eV	Lamp type :eV
Background: 2.0 ppm	BG: VOC O.O ppm	BG: VOC ppm
	H2S O ppm	HZSppm
	LEL O %	LEL%
•	СО Д рргп	COppm
	02 <u>70.9</u> %	O2%
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS
[ ] 100 ppm Isobutylene [ ] 10 ppm Hydrogen Sulfide [ ] 60 ppm Carbon Monoxide [ ] 1.45 % Methane [ ] 15 % Oxygen	Automatic	
OXYGEN METER/EXPLOSI	METER	
Model #: Serial #:		ground:
	CO =	andd
	H.S =	"ppm
	LEL :	=%
BATA		
áodel #: erial #:		

Background = 0.015 mg/m<sup>3</sup>

#### DAILY CALIBRATION DATA DATE: 5 123/00 Adam Hibbard HYGIENIST: RAE RAE HNU Model #: Model #: Model # : Scriel#: Scrial #: Scrial # : Lamp type: 10.6 eV Lamp type: 0.6 eV Lamp type : eV Background: 1.3 ppm BG: VOC \_\_\_ppm BG: VOC O O ppm H2S O ppm HZS \_\_\_\_ppm LEL O % LEL \_\_\_\_\_% CO D ppm CO ppm 02 20.9 % 02 \_\_\_\_\_\_% SPAN GAS CONCENTRATION SPAN ADJUSTMENT COMMENTS 100 ppm Isobutylene W 10 ppm Hydrogen Suifide 4 60 ppm Carbon Monoxide Automatic 145% Methane 2.5 % [4 15% Oxygen ZO.7% OXYGEN METER/EXPLOSIMETER Model #: Background: O<sup>2</sup> = \_\_\_\_\_\_% Scrial #: CO = \_\_\_\_\_ppm H\_S = \_\_\_\_\_ppm LEL = \_\_\_ % SIBATA Model #: Serial #: Background = 0.016 mg/m<sup>3</sup>

DATE: 8 /24/00		
HYGIENIST: Adam	Hibbard	
HNU Model # : Scrial # :	RÀÉ Model # : Serial # :	RAE Model #: Serial #:
Lamp type :eV	Lamp type : 10.6 eV	Lamp typeeV
Background :ppm	BG: VOC O.O ppm	BG: VOCppm
	H2S // ppm	H2Sppm
	LEL O %	LEL%
	со О ърпп	COppm
	02 20 9 %	O2%
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS
100 ppm Isobutyiene [1] 10 ppm Hydrogen Sulfide [2] 60 ppm Carbon Monoxide [3] 145% Methane Z.5% [4] 15% Oxygen 20.9%	Automanc	
OXYGEN METER/EXPLOSI	METER	
Model #: Scrial #:	•	ground:
	co*	•ppm
	H <sub>2</sub> S =	bbw
	LEL	=
SIBATA Model #: Serial #:		
sackground = <u>O. O. I.)</u> mg/m <sup>3</sup>		
·		
PAL THIC ORPHODOLUDATA		

	LI CALIDINATION.		
DATE: 8 25/00			
HYGIENIST: Adam Hhb	burd		
HNU Model # : Scriel # :	RAE Model #: Serial #:	RAE Model # : Serial # :	
Lamp type : 10.6 eV	Lamp type: 10.6 eV	Lamp type	eV
Background :ppm	BG: VOC O ppm	BG: VOC	ppm
	H2S O ppm	HZS	ppm
·	LEL 0 %	LEL	%
,	СО рргп	co	bbru
	02 20.9 %	02	
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS	
[c] 100 ppm Isobutylene [c] 10 ppm Hydrogen Sulfide [c] 60 ppm Carbon Monoxide [c] 145% Methane 2.5% [c] 15% Oxygen 20.9	Automatic		
OXYGEN METER/EXPLOSI	METER		
Model #: Serial #:		cground:	<b>-</b> -
	со	ppm	•
	H <sub>2</sub> S	=ppen	ļ
	LEL	=%	·
SIBATA Model #: Serial #: Background =0.015_mg/m <sup>3</sup>			Andrew State of the State of th
wy w			
ELAL TIMO DE PROGRADO ALL DIATA			

DATE: 8 160			
HYGIENIST: Alland	libberl		
HNU Model # : Serial # :	RAE Model #: Scrial #: 504754	RAE Model # : Serial # :	
Lamp type : <u>/0.6</u> eV	Lamp type: 12.6 eV	Lamp type :	eV_
Background: 1. 4 ppm	BG: VOC O,O ppm	BG: VOC	ppm
	H2S ppm	H2S	ppm
	LEL O %	LEL	%
	СО О ррпп	co	bbm
	02 20.8 %	O2	%a
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS	HOLESCO CONTRACTOR CON
[ ] 100 ppm Isobutylene [ ] 10 ppm Hydrogen Sulfide [ ] 60 ppm Carbon Monoxide [ ] 1.45 % Methane [ ] 15 % Oxygen	Automatic		:
		**************************************	
OXYGEN METER/EXPLOSI Model #:		ground:	
Scrial #:	O <sup>2</sup> =	<u> </u>	hall? part
	CO =	, audd	
	H,S =	ppm	
	LEL:	%	
SIBATA dodel #: lerial #: 06/9/210		The second secon	
sackground = $0.0/\Box$ mg/m <sup>3</sup>			
		٠	
<u></u>		•	
LALDING CREPFORNOLOCULDATA			

### DAILY CALIBRATION DATA DATE: (0/28/00) Adam Hibbine HYGIENIST: RAE HNU RAE Model #: PGM50-5P Model # : DL(0) Model #: Scrial #: 504754 Scriel#: Serial #: Lamp type : 10. 6 eV Lamp type: /Oc 6 eV Lamp type :\_\_\_\_\_eV Background: 1.2 ppm BG: VOC ppm H2S O ppm H2S ppm LEL 0 % LEL \_\_\_\_\_% co <u>D</u> ppm CO \_\_\_\_\_ppm 02 70.9 % O2 \_\_\_\_\_% SPAN GAS CONCENTRATION SPAN ADJUSTMENT COMMENTS [9 100 ppm Isobutylene [ 4 10 ppm Hydrogen Sulfide 60 ppm Carbon Monoxide Automatic 1.45% Methane 2.5% 15% Oxygen 20.9 OXYGEN METER/EXPLOSIMETER Model #: Background: Serial #: $O^2 =$ \_\_\_\_% CO = ppm H\_S = \_\_\_\_\_\_ppm LEL = % SIBATA PCD-L Serial #: 06 9 1210

Background = 0015 mg/m

		1
DA	ILY CALIBRATION I	DATA
DATE: 8 79 00		
HYGIENIST: Alam	Hibbard	
HNU Model #: D2101 Scrial #: 562065	RAE Model #: PGM 50 Serial #: 504754	RAE Model #: Serial #:
Lamp type: 10.6 eV	Lamp type: 10.6 eV	Lamp type :eV
Background: 1.3 ppm	BG: VOC O ppm	BG: VOCppm
	H2S O ppm	H2Sppm
	LEL%	LEL%
!	СОррпп	COppm
	02 20.9 %	O2%
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS
[1] 100 ppm Isobutylene [1] 10 ppm Hydrogen Sulfide [1] 60 ppm Carbon Monoxide [1] 1:45 % Methane 2 . 5 % [1] -15 % Oxygen 20.9%	Automatic	
OXYGEN METER/EXPLOSI Model #: Serial #:	<del></del>	ground:
	CO 255	
	H <sub>2</sub> S =	ppm ppm
	LEL =	%
SIBATA dode! #: PCD-( crist #: 06 9/2/2		-

Background =  $O.\infty1$  mg/m<sup>3</sup>

DATE: 8/30/00	n deut der 1945 - State Committe für für ihre ihre der der der Gereichte Geställe in der der der Statenberreic	(1996) (Suma chanda an the Beath and annu and a court of Success and America in a consequence
HYGIENIST: Adam	Hibbard '	
HNU Model #: DC 101 Scrial #: 567065	RAE Model #: PG LUSS Serial #: SO4754	<u>RAE</u> Model # : Serial # :
Lamp type: 10-6 eV	Lamp type: 10.6 eV	Lamp type :eV
Background: 1.2 ppm	BG: VOC O.Oppm	BG: VOCppm
	H2S ppm	H2S ppm
	LEL O %	LEL%
	СО О ррт	COppm
	02 20-9 %	O2%
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS
[] 100 ppm Isobutylene [] 10 ppm Hydrogen Sulfide [] 60 ppm Carbon Monoxide [] Las % Methane 2.5 [] 15% Oxygen 20.7	Automarie	
OXYGEN METER/EXPLOSI	METER	-
Model #: Scrial #:	Back	ground: %
	CO*	r porn
	H <sub>2</sub> S =	=ppm
	LEL	=%
SIBATA Model #: PCD-C Scrial #: 0691210	· · · · · · · · · · · · · · · · · · ·	
lackground = <u>2002</u> mg/m <sup>3</sup>		
, w		

#### DAILY CALIBRATION DATA DATE: 8 121100 HYGIENIST: Helain Hibbard RAE HNU Model #: PG M50 RAE Model #: DL10( Model #: Serial #: 504754 Scrial #: 567065 Serial #: Lamp type: 10,6 eV Lamp type: 10.6 eV Lamp type :\_\_\_\_eV BG: VOC O ppm Background: 1, 3 ppm BG: VOC ppm H2S O ppm HZS \_\_\_\_ppm LEL D % LEL \_\_\_\_ % со О рргл CO\_\_\_ppm 02 20.9 % 02 \_\_\_\_\_\_% SPAN GAS CONCENTRATION SPAN ADJUSTMENT COMMENTS 100 ppm Isobutylene 10 ppm Hydrogen Sulfide 60 ppm Carbon Monoxide Automatic 145% Methane 2.5% 18% Oxygen 20.9% OXYGEN METER/EXPLOSIMETER Model #: Background: Scrial # O<sup>2</sup> = % CO = \_\_\_\_pprox H<sub>2</sub>S = \_\_\_\_ppm LEL = % SIBATA Model #: PCD-1 Serial #: 0691210 Background = 0.00 | mg/m3

SALISTAL DIAC CHEMPORE SEASCAL COATA

DATE: 9 16 100		
HYGIENIST: Adam	1.blord	
HNU Model #: Scriel #:	RAE Model # : Scrial # :	RAE Model # : Serial # :
Lamp type :eV	Lamp type: 10.6 eV	Lamp type :eV
Background:ppm	BG: VOC O.o ppm	BG: VOCppm
	H2S O ppm	H2Sppm
	LEL%	LEL%
	CO C ppm	COppm
	02 20.9	02%
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS
[4] 100 ppm Isobutylene [4] 10 ppm Hydrogen Sulfide [5] 60 ppm Carbon Monoxide [6] 143% Methane 2.5% [6] 15% Oxygen 20.5%	Automaric	
OXYGEN METER/EXPLOSI	METER	The state of the s
Model #: Serial #:	. Back	ground:
	CO =	ppro
	H <sub>2</sub> S =	•
	LEL:	
SIBATA dodel #: crisi #:	in-folia-min, dan mga garakesinaku 2003/Pakining (in-faz zar-hvy-san garakesina), manganya 11 Mina yan	
sckground = 0-004 mg/m³		
_		
ALDICOPPOSOGOCULDATA		

DATE: 9 17 100			
HYGIENIST: Alam	H. Woord		
HNU Model # : Serial # :	RAE Model #: PGM - 50 Scrial #: 504754	RAE Model # : Serial # :	
Lamp type :eV	Lamp type: 10,6 eV	Lamp type :	eV
Background:ppm	BG: VOC O ppm	BG: VOC	ppm
'	H2S O ppm	HZS	ppm
	LEL <u>0</u> %	LEL_	%
	CO <u></u> ppm	со	ppm
	02 70.9 %	os	***************************************
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS	\\\\\\\\\\.
[4] 100 ppm Isobutyiene [4] 10 ppm Hydrogen Sulfide [4] 60 ppm Carbon Monocide [4] +35% Methane 2.5% [4] 18% Oxygen 20.9%	Automatic		,
OXYGEN METER/EXPLOSI	METER		
Model #: Serial #:		ground:	
	CO*	מוספ	
	H.S :	=ppxn	
	LEL	=	
SIBATA dodel #: PCD-1 icrial #: 0691213		A CONTRACTOR OF THE CONTRACTOR	
lackground = 0.004 mg/m			
			.
***		•	
LALDICORPFORMACILDATA			

DA	ILY CALIBRATION	DATA	
DATE: 911100			
HYGIENIST: Adam	Hibbard		
HNU Model #: Serial #:	RAE Model # : Scrial # :	RAE Model # : Serial # :	
Lamp type : 10.6 eV	Lamp type : 10 6 eV	Lamp type :	eV
Background: 1. 2 ppm	BG: VOC O. O ppm	BG: VOC	ppm
	H2S <u>O</u> ppm	H2S	ppm
	LEL <u>0</u> %	LEL	%
÷	СО О рргл	co	bbm
	02 20 9 %	os	<u>%</u>
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS	
[4] 100 ppm Isobutylene [4] 10 ppm Hydrogen Sulfide [4] 60 ppm Carbon Monowide [5] LAS Methane 2.5% [6] 13% Oxygen 20.6%	Automaric		
OXYGEN METER/EXPLOSI Model #: Serial #:		ground:	WHITHIRT STATE OF THE STATE OF
	CO =	% 5012	* <del>*</del>
•	H <sub>s</sub> s=		
	LEL :	*	,
IBATA lodel #: rial #:			
ackground = <u>0.005</u> mg/m <sup>2</sup>			
Sensitivity 59			

INCIDAL DISCONSTRUCTION TO

DATE: 9 15100		
hygienist: Alam H	ibbard	
HNU Model #: Scriel #:	RAE Model #: Serial #:	RAE Model # : Serial # :
Lamp type :eV	Lamp type : 10.6 eV	Lamp type :eV
Background:ppm	BG: VOC O . o ppm	BG: VOCppm
	H2S O ppm	H2S ppm
	LEL O %	
	СО О рргл	COppm
	02 <u>70. 9</u> %	O2%
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS
[] 100 ppm Isobutylene [] 10 ppm Hydrogen Sulfide [] 60 ppm Carbon Monoxide [] 1:45 % Methane 7 .5 % [] 15 % Oxygen Zo. 5 %	Automatic	
OXYGEN METER/EXPLOSI		
Model #: Serial #:		ground:
	CO =	nu
	H <sub>2</sub> S =	bbw
	LEL :	
SIBATA dodel #: erial #:		
sckground = 0.005 mg/m		
LLENCORPFORMOCAL DATA		

DATE: 9 /8/06			
HYGIENIST: Adam H	blowel		
HNU Model # : Scrial # :	RAE Model # : PG-M - 50 Scrial # : 504764	RAE Model # : Serial # :	
Lamp type:eV	Lamp type: 10.6 eV	Lamp type :	cV
Background:ppm	BG: VOC O.O ppm	BG: VOC	bbm
	H2S ppm	" H2S	_opm
	LEL 0 %	LEL	_%
	СО О ррт	СО	_ppin
	02 <u>70-9</u> %	02	_%
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS	
[4] 100 ppm Isobutylene [4] 10 ppm Hydrogen Sulfide [4] 60 ppm Carbon Monoxide [4] 143% Methane 1.5% [4] 18% Oxygen 20.7%	Automatic		
		MATERIA MATERI	. *
OXYGEN METER/EXPLOSI Model #: Scrial #:	Back	ground:	w.~.
	CO *		
	H.S =	•	
		**************************************	
SIBATA dodel #: PCD-1 crisi #: OG 9/2 10		THE PARTY OF THE P	
sekground = <u>0.003</u> mg/m <sup>3</sup>			
-			٠
ALTHIC DEPYTORMS DOLLLOW IN			

#### DAILY CALIBRATION DATA DATE: 919100 HYGIENIST: Adam Hibbard HNU RAE RAE Model #: Model # : PGM 50 Model #: Scrial #: 504754 Scrial #: Serial #: Lamp type :\_\_\_\_eV Lamp type: 10.6 eV Lamp type :\_\_\_\_\_eV Background: \_\_\_ppm BG: VOC O ppm BG: VOC \_\_\_ppm H2S O ppm HZS ppm LEL\_O % LEL \_\_\_\_\_\_% со О рргл CO\_\_\_\_ppin 02 20-9 % 02 % SPAN GAS CONCENTRATION SPAN ADJUSTMENT COMMENTS 100 ppm Isobutylene 10 ppm Hydrogen Sulfide 60 ppm Carbon Monocide Automatic 1.45 % Methane 2.5% [4 13-% Oxygen 20 -40/6 [4 OXYGEN METER/EXPLOSIMETER Model #: Background: Serial #: O<sup>2</sup> == \_\_\_\_\_ % CO = \_\_\_\_ppros H.S = \_\_\_\_\_ppm LEL = % SIBATA Model #:

Serial #:

Background = 0.00 ( mg/m)

#### DAILY CALIBRATION DATA DATE: 9/1/100 HYGIENIST: Adlan Hibbard RAE HNU RAE Model # : PGM-50 Model #: Model #: Serial #: 504754 Scriel#: Serial # : Lamp type: 10.6 eV Lamp type :\_\_\_\_\_eV Lamp type :\_\_\_\_eV BG: VOC O.O ppm Background: ppm BG: VOC ppm H2S O ppm HZS pam LEL 0 % LEL \_\_\_\_\_% co\_ o ppm CO\_\_\_\_ppm 02 20.7 % SPAN GAS CONCENTRATION SPAN ADJUSTMENT COMMENTS 100 ppm Isobutylene 10 ppm Hydrogen Sulfide 60 ppm Carbon Monoxide Automatic 145% Methane 2.5% 15% Oxygen 20.9% OXYGEN METER/EXPLOSIMETER Model #: Background: Scrial #: O<sup>2</sup> == % CO = \_\_\_\_\_ppm H<sub>2</sub>S = DOM LEL = % SIBATA Model #: PCD-1 Serial #: 0 691210 Background = 0.002 mg/m'

BURALTHE BYTORIGOCALDATA

DATE: <u>9 //2/00</u>			
HYGIENIST: Adam H	bhard	THE PROPERTY OF THE PROPERTY O	Pilekennessen melaphag ag salang yan 1942 <del>- 1942 - 1944 kina salah sala</del>
HNU Model # : Serial # :	RAE Model #: Serial #:	RAE Model # : Serial # :	
Lamp type :eV	Lamp type : 10. 6 eV	Lamp type :	eV
Background : ppm	BG: VOC O O ppm	BG: VOC	ppm
<b>.</b>	H2S <u>0</u> ppm	HZS	ppm
	LEL <u>0</u> %	LEL	%
	со О ррпп	co	ppin
	02 20.9 %	O2	
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS	
100 ppm Isoburyiene   10 ppm Hydrogen Sulfide   60 ppm Carbon Monoxide   1.45% Methane 7.5%   1.45% Oxygen D.9%	Automaric		
OXYGEN METERÆXPLOSI	METER		
Model #: icrial #:	. Back,	ground:	
	CO =	ррта	
	H <sub>s</sub> s=		
	LEL =	**	
IBATA lodel #: rial #:			
$ackground = 0.003 mg/m^3$			
		•	
LTH/CORP/PORMS/OCALIDATA			0

DATE: 9 14100			·	
HYGIENIST:			· ·	
HNU Model #: Scrist #: Lamp type:eV	RAE Model #: Serial #: Lamp type: 10.6 eV	RAE Model #: Serial #: Lamp type:		
Background:ppm	BG: VOC O.O ppm	BG: VOC		
ř	H2S O ppm	H2S		
	CO () ppm	LEL		
	02 <u>20 . ¶</u> %	co	··· <del>-</del>	
SPAN GAS CONCENTRATION  [1] 100 ppm Isobutylene 10 ppm Hydrogen Sulfide 50 ppm Carbon Monoxide 1.45 % Methane 15 % Oxygen	SPAN ADJUSTMENT Automaric	COMMENTS		
OXYGEN METER/EXPLOSIMETER         Background:           Model #:         0² =%				
CO =ppm				
H.S =ppm				
	111:			
TBATA fodel #: crial #:				
ackground = <u>O. / 25</u> mg/m <sup>3</sup>				
ALBACORYPORAGOCU.DATA				

DATE: 9/16/00		
HYGIENIST: Andrew WI	nght	
HNU Model#: Scrial#:	RAE Model #: P6m - 50 Serial #: 50 4754	RAE Model #: Serial #:
Lamp type :eV	Lamp type :eV	Lamp type :eV
Background: ppm	BG: VOC D ppm	BG: VOC ppm
,	H2S <u>O</u> ppm	H2Sppm
	LEL O %	LEL%
	СО О ррпп	COppm
	02 <u>23,9</u> %	oz%
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS
100 ppm Isobutylene 10 ppm Hydrogen Sulfide 60 ppm Carbon Monoxide 115% Methane 2.5% 18% Oxygen 20.9%	Automatic	
OXYGEN METER/EXPLOSI Model #: Serial #:	Back	ground:
		ррпа
		ppe
	LEL	*
SIBATA Model #: P(0-1 Serial #: 06 1/2/0		
$\frac{1}{2} \frac{1}{2}		
RALINGCORN/ORNEDCLI DATA		

DA	ILY CALIBRATION	**
DATE: 2 18102  HYGIENIST: Alan H.	bhed	
HNU Model #: Serial #:  Lamp type:eV  Background:ppm  SPAN GAS CONCENTRATION	RAE Model #: Serial #:  Lamp type: /O.6 eV  BG: VOC D.0 ppm  H2S ppm  LEL %  CO ppm  O2 LO/1 %  SPAN ADJUSTMENT	RAE         Model # :         Serial # :         Lamp type :eV         BG: VOCppm         HZSppm         LEL%         COppm         O2%    COMMENTS
[4] 100 ppm Isobutylene [4] 10 ppm Hydrogen Sulfide [4] 60 ppm Carbon Monoxide [4] 145% Methane 2.5% [4] 15% Oxygen 20.9	Automatic	
OXYGEN METER/EXPLOSI Model #: Serial #:	Back O' == CO = H.S =	ppm
SIBATA  Model #: Serial #:  Background = 0.00 \( \text{mg/m}^3 \)	LEL	**************************************

DATE: 9 //9/00		
HYGIENIST: Alam	Hibbard	
HNU Model # : Scrial # :	RAE Model # : Serial # :	RAE Model # : Serial # :
Lamp type :eV	Lamp type: 10.6 eV	Lamp typeeV
Background :ppm,	BG: VOC O.O ppm	BG: VOCppm
	H2S O ppm	HZSppm
	LEL%	LEL%
	СО О ррпп	COppm
	02 70.9 %	02%
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS
[1] 100 ppm Isobutylene [1] 10 ppm Hydrogen Sulfide [1] 60 ppm Carbon Monoxide [1] 143 % Methane [1] 15% Oxygen Zo. G	Automaric	
OXYGEN METER/EXPLOSI	METER	
Model #: Serial #:		(ground: %
	CO =	=ppm
	H,S	=ppm
	LEL	=%
SIBATA Model #: Serial #:		
Background = $\frac{D.DC4}{mg/m^3}$		
Walther Orp Porns docal data	A SALES CONTRACTOR OF THE SALE	

DATE: 9/20/00		
HYGIENIST: Adam Hh	bbard	
HNU Model # : Serial # :	RAE Model # : Serial # :	RAE Model #: Serial #:
Lamp type:eV	Lamp type 10.6 eV	Lamp typeeV
Background:ppm,	BG: VOC <u>D.O</u> ppm	BG: VOCppm
	H2S O ppm	H2Sppm
	LEL _ O%	LEL%
	mqeOO	COpm
	02 <u>70 8</u> %.	02
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS
[] 100 ppm Isobutylene [] 10 ppm Hydrogen Sulfide [] 60 ppm Carbon Monoxide [] 4-45% Methane [] 15% Oxygen	Automaric	
OXYGEN METER/EXPLOSI	METER	
Model #: Serial #:	Back	ground: %
·	CO =	
	H <sub>2</sub> S =	
	LEL	
SIBATA Model #: Scrisi #: Background = <del>[]. OO ( _ mg/m</del> ]		
Sensitive by 59		

DATE: 9 12500		
HYGIENIST: Adam	Hibbard	
HNU Model # : Scrial #	RAE Model # : Serial # :	RAE Model # : Serial # :
Lamp type :eV	Lamp type (O- (OeV	Lamp type :eV
Background:ppm_,	BG: VOC O ppm	BG: VOCppm
	H2Sppm	H2Sppm
	LEL _ %	LEL%
	СО	CO
	02 20.8 %	O2%
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS
[] 100 ppm Isoburylene [] 10 ppm Hydrogen Sulfide [] 60 ppm Carbon Monoxide [] 143% Methane [] 15% Oxygen	Automatic	
OXYGEN METER/EXPLOSI	METER	
Model #: Serial #:		ground:
		pp.m
		•/4
IBATA 10del #:		
erial #:		i de la companya de l
$sckground = \underbrace{C \cdot C^{3}}_{mg/m^{3}} mg/m^{3}$		
ALTHCOMPTORNS DCULDATA		

DATE: 9 /29/00			
HYGIENIST: Adam	Hubband		
HNU Model # : Serial # :	RAE Model #: Serial #:	RAE Model #: Serial #:	
Lamp type :eV	Lamp type 10.6 eV	Lamp type :	eV
Background:ppm_	BG: VOC _O, D _ppm	BG: VOC	ppm
<i>F</i>	H2S D ppm	HZS	
	LEL 0%	IEI	<u> </u>
	CO ppm	co	cbw
	02 20.8 %	02	*/a
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS	
[] 100 ppm Isobutylene [] 10 ppm Hydrogen Sulfide [] 60 ppm Carbon Monoxide [] 1-45% Methane [] 15% Oxygen	Automatic	,	
OXYGEN METER/EXPLOSI	METER		
Model #: Serial #:	Back	ground:	
	CO =		
		- ppm	
	•	*/a	
IBATA fodel #: rial #:			
nckground = mg/m³			
ETHICORPYTORNISMOCILICATA			

DATE:/0 /// 100			
HYGIENIST: Ada-	Hubbarl		
HNU Model #: Scrial #:	RAE Model # : Serial # :	RAE Model # : Secial # :	
Lamp type :eV	Lamp type . 10.6 eV	Lamp type :	eV
Background :ppm,	BG: VOC O.O ppm	BG: VOC	ppm
,	HDSppm	HZS	pm
	LEL	LEL	%
	CO O ppm	<b>c</b> o	cpm
	02 <u>20.8</u> %	O2	%
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS	
[ ] 100 ppm Isobutylene [ ] 10 ppm Hydrogen Sulfide [ ] 60 ppm Carbon Menoxide [ ] 145% Methane [ ] 15% Oxygen	Automarie		
DXYGEN METER/EXPLOSIT	VIETER		
Aodel #:  crist #:	Backs	ground: %	
	•	ביים ביים ביים ביים ביים ביים ביים ביים	
	LEL =	*	
BATA odel #: rial #:			
*ground			
MCAPPONEDCULATA			

DATE: 9 127 00			
HYGIENIST:			
HNU Model # : Scrial # :	RAE Model #: Serial #:	RAE Model #: Serial #:	
Lamp type:eV	Lamp type	Lamp type :	eV
Background :ppm,	BG: VOC _ O Ppm	BG: VOC	ppm
$oldsymbol{t}$	H2S ppm	HZS	bn
	LEL_O_%	LEL	
	со о эргл	co	<b></b>
	02 20.9 %	O2	<u></u> %
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS	
[] 100 ppm Isobutylene [] 10 ppm Hydrogen Sulfide [] 60 ppm Carbon Monoxide [] 1.45% Methane [] 15% Oxygen	Automaric		
OXYGEN METER/EXPLOSI	METER	MARKET 1997	
Model #: Serial #:	Back O² =	ground: %	
	CO =	*ppm	
	H,S =	= <u>ppm</u>	į
	LEL	%	
SIBATA  fodel #: erial #:	· ·		
ackground = OOU mg/m'			
ALTINC DEPIPORNOLOCIADATA			

DA	LILY CALIBRATION	DATA	
DATE: 9/25/05			
HYGIENIST: Adam	hbbal		
HNU Model # : Scriel # :	RAE Model #: Serial #:	RAE Model # : Serial # :	
Lamp type :eV	Lamp type . 10.6 eV	Lamp type	eV
Background :ppm_,	BG: VOC O-D ppm	BG: VOC	bpm
•	H2S O ppm	HZS	៩ស្វារា
	LEL_O_%	I II I.	%
·	СО _ О _ эргп		con
	02 20.9 %	02	%
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS	
[] 100 ppm Isobutylene [] 10 ppm Hydrogen Sulfide [] 60 ppm Carbon Monoxide [] 1.45% Methane Z.5% [] 1.5% Oxygen Zo-9%	Automaric		
DXYGEN METER/EXPLOSI	METER		
Model #: Acrial #:	Back O² ==	ground:	
	CO =		
	H <sub>2</sub> S =	=ppm	
	LEL	*/«	
IBATA ode! #: risi #:			Ville III, asquarqq
$ck$ acomq = $m_{k}m$ ,			
•	•		

DATE: 0 12400		
HYGIENIST: Ala-	Hubbad	
HNU Model # : Scrisl # :	RAE Model # : Serial # :	RAE Model #: Serial #:
Lamp type :eV	Lamp typeeV	Lamp typeeV
Background:ppm,	BG: VOC C - C ppm	BG: VOCppm
• • • • • • • • • • • • • • • • • • •	HDS ppm	HZSppm
	LEL_O_%	LEL%
	CO C spm	CO
.*	02 ZC-4 %	02%
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS
[] 100 ppm Isoburyiene [] 10 ppm Hydrogen Sulfide [] 60 ppm Carbon Monoxide [] 145% Methane [] 15% Oxygen	Automatic	·
OXYGEN METER/EXPLOSI		
Scrial #:	O <sub>1</sub> =	ground: %
	CO *	mqc
	H <sub>2</sub> S =	ppm
	LEL :	=%
IBATA fodel #: rial #:		
sckground = $0.000$ mg/m <sup>3</sup>		
···· ··· ··· ··· ··· ··· ··· ··· ··· ·		
LTMC DRYTORNS-DC.AL. (DATA		

## DAILY CALIBRATION DATA DATE: 11 /1 / 00 Adam Hibbard HYGIENIST: RAE RAE HNU Model #: Model #: Model #: Scrial #: Serial #: Serial #: Lamp type 10.6 eV Lamp type :\_\_\_\_\_eV Lamp type :\_\_\_\_eV Background: \_\_\_\_ppm\_ BG: VOC 0.0 ppm BG: VOC \_\_\_\_ppm H2S <u>O</u> ppm HZS \_\_\_\_ppm LEL O % LEL \_\_\_\_\_% CO \_\_\_\_\_\_\_ mac O OO 02 20.9 % SPAN GAS CONCENTRATION SPAN ADJUSTMENT COMMENTS 100 ppm Isobutylene 10 ppm Hydrogen Sulfide 60 ppm Carbon Monoxide 1-45% Methane 2.5% 15% Oxygen 20.7% Automatic **OXYGEN METER/EXPLOSIMETER** Model #: Background: O<sup>2</sup> = \_\_\_\_\_\_\_% Scrial #: CO = \_\_\_\_\_ppm $H_2S = ____ppm$ LEL = %

SIBATA

Model #:

Serial #:

Background = 0.005 mg/m

Sonsitivity 59

HYGIENIST: Adam   Hobbard	
HNU   Model #:   Serial #:	
Model #:         Serial #: <td< td=""><td></td></td<>	
Background :         ppm         BG: VOC         D ppm         BG: VOC         ppm           H2S         ppm         H2S         ppm           LEL         %         LEL         %           CO         ppm         CO         ppm           O2         LOG         %         O2         %    SPAN GAS CONCENTRATION  SPAN ADJUSTMENT  COMMENTS  [*] 100 ppm Isobutylene [*] 10 ppm Isobutylene [*] 10 ppm Garbon Monoxide [*] 60 ppm Carbon Monoxide [*] 4-45 % Methane 2 . 5 %         Automaric         Automaric	
H2S ppm H2S ppm  LEL % LEL %  CO ppm CO ppm  O2 20.9 % O2 %  SPAN GAS CONCENTRATION SPAN ADJUSTMENT COMMENTS  [Y 100 ppm Isobutylene EL 10 ppm Hydrogen Sulfide EL 60 ppm Carbon Monoxide EL 60 ppm Carbon Monoxide EL 3% Methane 2.5 %	
LEL	2
CO D ppm CO gptm  O2 ZO 9 % O2	i
SPAN GAS CONCENTRATION SPAN ADJUSTMENT COMMENTS  [ 100 ppm Isobutylene [ 10 ppm Hydrogen Sulfide [ 60 ppm Carbon Monoxide [ 1445 % Methane 2.5 %	
SPAN GAS CONCENTRATION SPAN ADJUSTMENT COMMENTS  [1] 100 ppm Isobutylene [L] 10 ppm Hydrogen Sulfide [L] 60 ppm Carbon Monoxide [L] 60 ppm Carbon Monoxide [L] 1.45% Menhane 2.5%	
[] 100 ppm Isobutylene [] 10 ppm Hydrogen Sulfide [] 60 ppm Carbon Monoxide [] 1.45% Menhane 2.5%	
[] 10 ppm Hydrogen Sulfide [] 60 ppm Carbon Monoxide Automatic [] 1.45 % Methane 2.5 %	
OXYGEN METER/EXPLOSIMETER	
Model #:         Background:           Serial #:         0' =	
CO *pπ	
H_S =ppm	
LEL =%	
IBATA  fodel #: PCD -1  crial #: 0691210	
*ckground = Q. oo3 mg/m'	
ALTINCONPRODUCH DA7A	

			2.5% 35% 37
DATE: 10 123 100			
HYGIENIST: Aclan	- Hibbard		
HNU Model # : Serial # ·	RAE Model #: Serial #:	RAE Model # : Serial # :	
Lamp type :eV	Lamp type 10- cz eV	Lamp type	eV
Background:ppm_	BG: VOC _C_O ppm	BG: VOC	bbw
	H2S ppm	H2S	ppm
	LEL_2%	LEL	%₀
	СО Эрт	co	cpm
	02 70.7 %	02	
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS	<del>0,704 (4</del>
[] 100 ppm Isobutylene [] 10 ppm Hydrogen Sulfide [] 60 ppm Carbon Monoxide [] 1:45% Methane [] 1:5% Oxygen	Automaric		
OXYGEN METERÆXPLOSI	METER		
Model #: Serial #:	Back;	ground: %	
		מומכ	
		pom	
	_	%	
IBATA odel #: rial #:			
ckground = 0.005 mg/m³			
Consituity 59			

DA	ILY CALIBRATION	DATA
DATE: 11 /2/00		
HYGIENIST: Adam H.	bhad	
HNU Model # : Scrial #	RAE Model #: Serial #:	RAE Model #: Serial #:
Lamp type :eV	Lamp type . 10.6 eV	Lamp typeeV
Background: ppm	BG: VOC O.O ppm	BG: VOCppm
	H2S O ppm	HZSpm
	LEL_O_%	LEI
	CO 0 50m	CO
	02 70.8 %	O2
PAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS
100 ppm Isobutylene 10 ppm Hydrogen Sulfide 60 ppm Carbon Monoxide 145% Methane 2.5% 15% Oxygen 20.9%	Automaric	
XYGEN METERÆXPLOSI	METER	
odel#: rial#:	Back O' =	ground: '
	CO =	מוקכ
	H,S =	:ppm
	LEL :	
BATA del #: ial #:		
kground = <u>0.005</u> mg/m <sup>3</sup>		

IBAJEALTING DEPPROENS DOLU DATA

DATE: 10/6/00			
HYGIENIST: A-lan F	libbard		
HNU Model # : Scrisl #	RAE Model #: Serial #:	RAE Model # : Serial # :	
Lamp type:eV	Lamp type 10.6 eV	Lamp typeeV	
Background:ppm_	BG: VOC O.O ppm	BG: VOCppm	
	H2S O ppm	HZScpm	
	LEL O%	LEI%	
	CO <u>o</u> sew	CO	
	02 70.8 %	02	
SPAN GAS CONCENTRATION	SPAN ADJUSTMENT	COMMENTS	
[] 100 ppm Isobutylene [] 10 ppm Hydrogen Sulfide [] 60 ppm Carbon Monoxide [] 4.45% Methane 2.5% [] 15% Oxygen 20.9%	Automaric		
DXYGEN METER/EXPLOSE	METER	(Particular	
Model #: Serial #:		ground: %	
•			
	•	=	
IBATA lode! #: rial #:			
ckground = mg/m;			
		~	
LINCEPPORNSDELL DATA			

Drum Removal RAM, Status Report No. 2 and Completion Statement Olin Corporation July 12, 2001

### AIRBORNE DUST DATA

PH.ZIP	Chai	n of Custody	/ <sub>3 s</sub> tecord	Sample Container	r Information
ANNI VEICAL CEDIUCES	1418 Pottsville Pike F hone: (610) 921-8833	Reading, PA 19605 fax: (610) 921-9667	Bottle Type  (G P IH)  # of Containers	3 1 1 1 1 1	
PO #	Job ID		D	$\Rightarrow$	
Report Results To:  Name A dam f Company Seven Mailing Address 5 City Wilming to Telephene 8	Ison 1/0 Olin	(DCP et ZIP 01887	native de la la la la la la la la la la la la la		
Send Company Seven Invoice Mailing Address 27 To: City MI a gar a Credit Cerd II	Son Dept.	ZIP 11/3() 2		Page I PAS Quote#	of \
Sampled by:	Air Vel. (L. Mairix Date	Time	3//////////		
SAMPLE DESCRIPTION		Sampled		Comments/Hazards/ Loc	ation Details
1 538580 WZ 8/5 2 538580 WZ 8/5 3 5 22909 DW 8/9 4 585299 DN 8/9 5 558580 WZ 8/W 6 585279 PN 8/10 7 502617 UW 8/10 8 538702 PS 8/10 9 52290 DW 8/10	10153 1035.41 1070.6 \$/8/00 573.8 \$/0/00 435.9 \$/0/00 976.7 \$\frac{1}{976.7}\$\$\frac{1}{976.			Pour wind  Pormeter North  Down wind  Pormeter North  Look some An  Pormeter Num  Look some An  Pormeter Num  Lown to Num  Verimeter Sout	Area B Area B ora B ora B ora B ora B
Samples relinquished to shipper or courier by:  Samples received by:	Deliverables and Turn Ard	Date Time  Date Time  Time	Samples Relinquished by: Samples Relinquished by:	Samples Relinquished to:  Samples Relinquished to  Laboratory ( ) 1 1 ( a )	Date Time
Method of Shipment/Delivery:  Samples Rec'd. on Samples rec'd intact?(Y)  VOC Samples have a	Ice? (Y N) n/a) Ter N) Custody seals Into	np. Blank nct?(YN n7a) ID	Sample Tempon samples match COC2(YN)	Notes:	



### ENVIRONMENTAL TESTING

-EPVNYLAP 101262-0 ECHOOL ON MOLTAFICERSON AHIA .

• MY DOH 10903 + PAIDER 06-303 • NJ DEF 77578

## ANALYTICAL REPORT

Client:

Sevenson Environmental Servicès, Inc.

Project:

Report to: Adam Hibbard Received:

15-AUG-00

Sevenson Environmental Services, Inc.

Reported:

21-AUG-00

2749 Lockport Road

P.O. Box 396

Niagara Falls NY 14302

Project Description: Dust and Total Chromium Analysis

	RESULT	UNITS	CONCENTRATION UNITS	METHOD
538902PS8/9 Air Volume: 1055.9 L Lab Semple: 1415402 sampled: 09-AUG-00		<b>*</b> **		
Particulate, Total Chromium, Total	< 0.10 0.0007	mg/sample mg/sample	< 0.095 mg/m3 0.00066 mg/m3	0500 7300M
538580WZ8/9 Air Volume: 1053 L Lab Sample: 1415403 sampled: 09-AUG-00				
Particulate, Total Chromium, Total	< 0.10 0.0007	mg/sample mg/sample	< 0.095 mg/m3 0.00067 mg/m3	0500 7300M
522909DW8/9 Air Volume: 1038.4 L Lab Sample: 1415404 sampled: 09-AUG-00		·		
Particulate, Total Chromium, Total	< 0.10 0.0007	mg/sample mg/sample	< 0.096 mg/m3 0.00067 mg/m3	0500 7300M
583299PN8/9 Air Volume: 1070.6 L Lab Sample: 1415405 sampled: 09-AUG-00				
Particulate, Total Chromium, Total	0.21 0.0007	mg/sample mg/sample	0.196 mg/m3 0.00065 mg/m3	0500 7300M



### ENVIRONMENTAL TESTING

- EPA/NVLAP 101262-0

RESULT

\* AIHA ACCREDITATION NO. 100439

- NY DOH 10903 • PA DER 06-353 • NU DEP 77:78

Client:

Sevenson Environmental Services, Inc.

Project:

196091

502617UW8-	15A	
Air Valume:	1048 8 1	

Lab Sample: 1416258 sampled: 15-AUG-00

Particulate, Total Chromium, Total < 0.10 0.0006 mg/sample mg/sample

UNITS

< 0.095 mg/m3 0.00057 mg/m3

CONCENTRATION UNITS

C-500 7300M

METHOD

522909DW8-15A

Air Volume: 1034.5 L Lab Sample: 1416259 sampled: 15-AUG-00

Particulate, Total Chromium, Total

< 0.10 0.0007 mg/sample mg/sample

< 0.097 mg/m30.00068 mg/m3 C300 7300M

502617WZ8-17A

Air Volume: 630 L Lab Sample: 1416260 sampled: 17-AUG-00

Particulate, Total Chromium, Total

< 0.10 0.0006

mg/sample mg/sample

< 0.16 mg/m30.0010 mg/m3 C 500 73COM

583299DW8-17A

Air Volume: 560 L Lab Sample: 1416261 sampled: 17-AUG-00

Particulate, Total Chromium, Total

< 0.10 0.0007 mg/sample mg/sample

< 0.18 0.0013

mg/m3mg/m3 0.500 7.300M

522909UW8-17A

Air Volume: 630 L Lab Sample: 1416262 sampled: 17-AUG-00

Particulate, Total Chromium, Total

< 0.10 0.0007 mg/sample mg/sample < 0.16 0.0011

mg/m3mg/m3 C 500 7300M



### ENVIRONMENTAL TESTIFIC

- EPA/NVLAP 101262-0

+ AIHA ACCREDITATION NO. 100439

• NY DOH 10903 • PA DER 06-353 - NJ DEP 77578

Client:

Sevenson Environmental Services, Inc.

Project:

196091

RESULT

UNITS

CONCENTRATION UNITS

N'ETHOD

538902EP8-17A

Air Volume: 672 L Lab Sample: 1416263 sampled: 17-AUG-00

Particulale, Total

< 0.10

mg/sample mg/sample < 0.15 0.0009

mg/m3 (500 mg/m3 7300M

538580WP8-17A

Chromium, Total

Air Volume: 665 L Lab Sample: 1416264 sampled: 17-AUG-00

Particulate, Total

< 0.10

mg/sample

< 0.15

0300

Chromium, Total

0.0007

7 mg/sample

0.0011 mg/m3

mg/m3 mg/m3

7.300M

The laboratory blank sample was above the reporting limit for Cr

(0.0004 mg/sample). The results were not blank corrected.

Final sample concentrations calculated from air volumes supplied on chain of custody. < Indicates less than the limit of quantitation.

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53890	1W28-15A	1108.6	<u> </u>		1-1-	71		<u> </u>	<u>                                     </u>	_].					lebels zone choice it
50261	74W8-12V	1048.8		₹.	<i>\\\</i>										Sprind truck 1945 11
522905	DAIR-ISA	1034.5		8/15/0	570	$\perp \angle \sqcup$						اتنا	الن		Domanuel Break
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### ENVIRONMENTAL TESTING

· EPA/NVLAP 101262-0

\* AIHA ACCREDITATION NO 100439

- NY DOH 10903 • PA DER 06-353 \* NJ DEP 77678

## **ANALYTICAL REPORT**

Client:

Sevenson Environmental Services, Inc.

Project:

196091

Report to:

Received: Reported:

21-AUG-00 28-AUG-00

Adam Hibbard

Sevenson Environmental Services, Inc.

2749 Lockport Road

P.O. Box 396

Niagara Falls NY 14302

Project Description:

E672

Dust and Chromium Analysis

	RESULT	UNITS	CONCENTRATION	<u>UNITS</u>	METHOD
583299EP8-15A Air Volume: 1060.2 L Lab Sample: 1416255 sampled: 15-AUG-00					
Particulate, Total Chromium, Total	< 0.10 0.0007	mg/sample mg/sample	< 0.094 0.00066	mg/m3 mg/m3	£ 300 7,300M
538580WP8-15A Air Volume: 661.2 L Lab Sample: 1416256 sampled: 15-AUG-00					
Particulate, Total Chromium, Tolal	< 0.10 0.0007	mg/sample mg/sample		mg/m3 mg/m3	C 500 7.300M
538902WZ8-15A Air Volume: 1108.6 L Lab Sample: 1416257 sampled: 15-AUG-00					
Chromium, Joial	0.0007	mg/sample	0.00063 r	ng/m3	7300M

Unable to report dust - filter and back pad reversed in cassette.

page 2 of 3

2140 400\_100/\_13\_N 261\_REA

#### INDUSTRIAL HYGIENE

RESULT

S. 1

< 0.10

< 0.10

< 0.10

0.0007

0.0007

0.0007

#### ENVIRONMENTAL TESTING

mg/m3

mg/m3

mg/m3

mg/m3

mg/m3

mg/m3

\*EFWNVLAP 101262-0

- ATTA ACCREDITATION NO TOMBY

UNITS

mg/sample

mg/sample

mg/sample

mg/sample

mg/sample

mg/sample

- NY DOLL 10003 · PA DER 06-353

CONCENTRATION UNITS

< 0.17

< 0.11

< 0.11

8000.0

0.0007

0.0012

- NUIDEP 77678

METHOD

0500

0500

0500

7300M

7300M

7300M

Sevenson Environmental Services, Inc.

Project:

195940

538580WZ8/10 Air Volume: 573.8 L Lab Sample: 1415406 sampled: 10-AUG-00

Parliculate, Total

Chromium, Total

583299PN8/10 Air Volume: 935.9 L Lab Sample: 1415407 sampled: 10-AUG-00

Parliculate, Total Chromium, Total

502617UW8/10 Air Volume: 923.1 L

Lab Sample: 1415408 sampled: 10-AUG-00

Parliculate, Total Chromium, Total

538902P\$8/10 Air Volume: 976.7 L

Lab Sample: 1415409 sampled: 10-AUG-00

Particulate, Total Chromium, Total

< 0.10 0.0007

mg/sample mg/sample < 0.10 0.0007

mg/m3 0500 mg/m3 7300M

522909DW8/10

Air Volume: 920.6 L Lab Sample: 1415410 sampled: 10-AUG-00

Particulate, Total

< 0.10

mg/sample

< 0.11

mg/m3

0500

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RIAUGOULTETZ\_IS & INSLEYR

PHILP

### INDUSTRIAL HYGIENE

### ENVIRONMENTAL TESTING

· EPANNYLAP 101262-0

- AIHA ACCHEDITATION NO. 100439

• NY DOH 10903 • PA DEH 06-351 \* NU DEP 7/9/2

Client:

Sevenson Environmental Services, Inc.

Project:

195940

RESULT

UNITS

CONCENTRATION UNITS

METHOD

522909DW8/10

Lab Sample: 1415410 - continued

.

Chromium, Total

0.0008

mg/sample

0.0009 mg/m3

7300M

The laboratory blank sample was above the reporting limit for Cr

(0.0004 mg/sample). The results were not blank corrected.

Final sample concentrations calculated from air volumes supplied on chain of custody. < Indicates less than the limit of quantitation.



### ENVIRONMENTAL TESTING

-EPA/NVLAP 101262-0

- AHA ACCREDITATION NO. 100439

• NY DOH 10903 • PA DER 06-353 · NJ DEP 77678

Client:

Sevenson Environmental Services, Inc.

Project:

196378

RESULT

UNITS

CONCENTRATION UNITS

METHOD

583299EP8-25A (East Perimeter Area A)

Air Volume: 881.91 L Lab Sample: 1417681 sampled: 25-AUG-00

Particulate, Total Chromlum, Total

< 0.10 0.0007 mg/sample

< 0.11 mg/m3 0.0008 mg/m3 0500 7300M

583299DW8-26A (Downwind Area A)

Air Volume: 993.6 L Lab Sample: 1417682 sampled: 26-AUG-00

Particulate, Total Chromkum, Total

0.20 0.0007 mg/sample mg/sample 0.20 0.0007

mg/m3 05 mg/m3 73

0500 7300M

538580UW8-26A (Upwind Area A)

Air Volume: 591.3 L Lab Sample: 1417683 sampled: 26-AUG-00

Particulate, Total Chromium, Total

0.12

mg/sample mg/sample 0.20

mg/m3 mg/m3 0500 7300M

522909NP8-26A (North Perimeter Area A)

Air Volume: 974.7 L Lab Sample: 1417684 sampled: 26-AUG-00

Particulate, Total Chromium, Tolal

< 0.10 0.0007 mg/sample mg/sample < 0.10 0.0007 mg/m3 mg/m3 0500 7300M

538902\$P8-26A (South Perimeter)

Air Volume: 788.4 L Lab Samplo: 1417685 sampled: 26-AUG-00

Particulate, Total

0.13

mg/semple

0.16

mg/m3

0500



### ENVIRONMENTAL TESTING

-EPA/NVLAP 101262-0

• NY DOH 10903 . AIHA ACCREDITATION NO. 100439 • PA DER 06-353

• NJ DEP 77678

Client:

Sevenson Environmental Services, Inc.

Project:

196378

RESULT

UNITS

CONCENTRATION UNITS

METHOD

538902SP8-26A (South Parimeter)

Lab Samplo: 1417685 - continued

Chromium, Total

0.0007

mg/sample

0.0009 mg/m3 7300M

The laboratory blank sample was above the reporting limit for Cr (0.0004 mg/sample). The resutts were not blank corrected.

Final sample concentrations calculated from air volumes supplied on chain of custody. < indicates less than the limit of quantitation.

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### ENVIRONMENTAL TESTING

\*EPA/NVLAP 101262-0

AIHA ACCREDITATION NO. 100439

• NY DOH 10903 • PA DER 06-353 • NJ DEP 77678

## **ANALYTICAL REPORT**

Client:

Sevenson Environmental Services, Inc.

Project:

196378

Received:

30-AUG-00

Reported:

07-SEP-00

Report to:

Adam Hibbard

Sevenson Environmental Services, Inc.

51 Earnes Street

Willimington MA 01887

Project Description:

E-672: Olin Corp.

IH Metals & Fugitive Dust

	RESULT	UNITS	CONCENTRATION	UNITS	METHOD
502617WZ8-25A (Work Zone Area A) Air Volume: 836.5 L Lab Sample: 1417677 sampled: 25-AUG-00					
Parliculate, Total Chromlum, Tolal	0.39	mg/sample mg/sample	0.47	mg/m3 mg/m3	0500 7300M
538902WP8-25A (West Perimeter Area A) Air Volume: 683.54 L Lab Sample: 1417678 sampled: 25-AUG-00					
Particulate, Total Chromium, Total	< 0.10 0.0007	mg/sample mg/sample	< 0.15 0.0010	mg/m3 mg/m3	0500 7300M
522909DW8-25A (Downwind Area A) Air Volume: 850,4 L Lab Sample: 1417679 sampled: 25-AUG-00		·		-	
Particulate, Total Chromium, Total	0.13 0.0007	mg/sample mg/sample	0.15 0.0008	mg/m3 mg/m3	0500 7300M
538580UW8-25A (Upwind Areg A) Air Volume: 528.19 L Lab Sample: 1417680 sampled: 25-AUG-00					
Particulate, Total Chromium, Total	< 0.10 0.0007	mg/sample mg/sample	< 0.19 0.0013	mg/m3 mg/m3	0500 7300M

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Client drop off Other

Samples Rec'd, on Ice? (Y N (n/a) Temp. Blank Sample Temp.

Samples rec'd intact?(YN) Custody seals intact?(YN n/a) ID on samples match COC?(YN)

VOC Samples have zero headspace?(YN(n/a)) Samples properly preserved? (YN n/a)

PAS.Courier

UPS (FED-EX)

Methud of Shipment/Delivery:

Notes:

100 But was a live of the contract of



### **ENVIRONMENTAL TESTING**

\*EPA/NVLAP 101262-0 \*AIHA ACCREDITATION NO. 100439

\* NY (XOH 10903 - PA DEH 00-353

• NJ DEP 77678

## **ANALYTICAL REPORT**

Client:

Sevenson Environmental Services, Inc.

Project:

196515

Received:

01-SEP-00

Reported:

12-SEP-00

Report to:

Adam Hibbard

Sevenson Environmental Services, Inc.

51 Eames Street

Willimington MA 01887

Project Description: E-672

Chromium and Dust Analysis

•					
	RESULT	UNITS	CONCENTRATION	UNITS	METHOD
522909EP8 or UW8-29A Air Volume: 1063.04 L Leb Sample: 1418300 sampled: 29-AUG-00					
Chromlum, Total Particulate, Total	0.0007 0.11	mg/sample mg/sample	0.00066 0.103	mg/m3 mg/m3	7300M 0500
502617WP8 or DW8-29A Air Volume: 1087.2 L Lab Sample: 1418301 sampled: 29-AUG-00					
Chromium, Total Particulate, Total	0.0007 0.18	mg/sample mg/sample	0.00064 0.166	mg/m3 mg/m3	7300M 0500
583299NP8-29A Air Volume: 1099.28 L Lab Sample: 1418302 sempled: 29-AUG-00					•
Chromium, Total Particulate, Total	0.0006 0.13	mg/sample mg/sample	0.00055 0.118	mg/m3 mg/m3	7300M 0500
538580WZ8-29A Air Volume: 667.42 L Lab Sample: 1418303 sampled: 29-AUG-00					
Chromium, Total Particulate, Total	0.0007 < 0.10	mg/sample mg/sample		mg/m3 mg/m3	7300M 0500

### **ENVIRONMENTAL YESTING**

- EPA/NVLAP 101/262-0 · AIHA ACCREDITATION NO. 100439 ■NY DOH 10903 • PAIDEH 06-353 • NUDEP 77678

Client:

Sevenson Environmental Services, Inc.

m.: 3

Project:

196515

RESULT

UNITS

CONCENTRATION UNITS

METHOD

538902SP8-29A

Air Volume: 884.86 L Lab Sample: 1418304 sampled: 29-AUG-00

Chromium, Total Parliculate, Total 0.000B 0.48

mq/sample mg/sample 0.0009 0.54

ma/m3 mg/m3

7300M 0500

502617WP8 or DW8-30A

Air Volume: 1116.18 L Lab Sample: 1418305 sampled: 30-AUG-00

Chromium, Tolai Particulate, Total

0.0007 < 0.10

mg/sample mg/sample

0.00063 mg/m3 < 0.090 mg/m3 7300M 0500

522909EP8 or UW8-30A

Air Volume: 1128.9 L Lab Sample: 1418306 sampled: 30-AUG-00

Chromium, Total Parliculate, Total

0.0007 < 0.10

mg/sample mg/sample

0.00062 mg/m3 < 0.089 mg/m3

7300M 0500

583299NP8-30A

Air Volume: 1154.34 L Lab Sample: 1418307 sampled: 30-AUG-00

Chromium, Total Particulate, Total

0.0007 0.10

mg/sample mg/sample 0.00061 mg/m3 0.087 mg/m3 7300M 0500

538580WZ8-30A

Air Volume: 696.42 L Lab Sample: 1418308 sampled: 30-AUG-00

Chromium, Total Particulate, Total

0.0008 0.35

mg/sample mg/sample 0.0011 0.50

mg/m3mg/m3

7300M 0500



### ENVIRONMENTAL TESTING

· EPANVLAP 101262-0

- AIHA ACCREDITATION NO 100439

• NY DOH 10903 • PA DER 06-353 - NU DEP 7767H

Client:

Sevenson Environmental Services, Inc.

Project:

196515

RESULT

**UNITS** 

CONCENTRATION UNITS

METHOO

538902SP8-30A

Air Volume: 950.82 L Lab Sample: 1418309 sampled: 30-AUG-00

Chromium, Total

0.0007

mg/sample

0.0007

mg/m3

7300M

The laboratory blank sample was above the reportionlimit for Cr (0.0006 mg/sample). The results were not blank corrected.

Parliculate, Total

< 0.10

mg/sample

< 0.11

mg/m3

0500

Final sample concentrations calculated from air volumes supplied on chain of custody. < Indicates less than the limit of quantitation.

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## Chain of Custot, Record

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### ENVIRONMENTAL TESTING

• EPA/NVLAP 101262-0

\* AIFIA ACCREDITATION NO. 100439

• NY DOH 10903 • PA DER 06-353 • NU DEP TALLS

0500

7300M

## **ANALYTICAL REPORT**

Client:

Sevenson Environmental Services, Inc.

Project:

196758

Report to: Adam Hibbard

Received: Reported:

12-SEP-00

Sevenson Environmental Services, Inc. 51 Eames Street

Willimington MA 01887

.

19-SEP-00

Project Description:

Particulate, Total

Chromium, Total

E672: IH Metals & Dust

Sampled 9/6 & 9/7/00

	RESULT	UNITS	CONCENTRATION	UNITS	METHOD
583299NP9-6A, North Perimeter Area A Air Volume: 1110.78 L Lab Sample: 1419174 sampled: 06-SEP-00					
Particulate, Total Chromium, Total	0.21	mg/sample mg/sample	0.189 0.00072	mg/m3 mg/m3	0500 7300M
522909EP9-6A, East Perimeter Area A Air Volume: 676.26 L Lab Sample: 1419175 sampled: 06-SEP-00					·
Particulate, Total Chromium, Total	0.20	mg/sample mg/sample		mg/m3 mg/m3	0500 7300M
538902SP9-6A, South Perimeter Area A Air Volume: 862.92 L Lab Sample: 1419176 sampled: 06-SEP-00					
Particulate, Total Chromium, Total	< 0.10 0.0008	mg/sample mg/sample		mg/m3 mg/m3	0500 7300M
502617WP9-6A, West Perimeter Area A Air Volume: 1055.7 L Lab Sample: 1419177 sampled: 06-SEP-00					·

< 0.10

0.0008

mg/sample

mg/sample

< 0.095

mg/m3

0.00076 mg/m3



### **ENVIRONMENTAL TESTING**

• EPA/NVLAP 101262-0

\* Alha ACCREDITATION NO. 100439

• NY DOH 10903 • PA DER 06-353 \*1.00E9 77676

ANDER OUT THE ST. ST. MARK ST. ST.

Client:

Sevenson Environmental Services, Inc.

Project:

196758

RESULT

<u>UNITS</u>

CONCENTRATION UNITS

METHOD

538580NP9-7A, North Perimeter Area A

Air Volume: 1042.32 L Lab Sample: 1419178 sampled: 07-SEP-00

Particulate, Total Chromium, Total

< 0.10

mg/sample mg/sample

< 0.096 mg/m3 0.00067 mg/m3 0500 7300M

522909SP9-7A, South Perimeter Aréa A

Air Volume: 1090.8 L Lab Sample: 1419179 sampled: 07-SEP-00

Particulate, Total Chromium, Total < 0.10 0.0008

mg/sample mg/sample < 0.092 mg/m3 0.00073 mg/m3 0500 7300M

538902WP9-7A, West Perimeter Area A

Air Volume: 1090.8 L Lab Sample: 1419180 sampled: 07-SEP-00

Particulate, Total Chromium, Total

0.11

mg/sample mg/sample 0.101 mg/m3 0.00064 mg/m3 0500 7300M

502617EP9-7A, East Perimeter Area A

Air Volume: 1042.32 L Lab Sample: 1419181 sampled: 07-SEP-00

Particulate, Total Chromium, Total 0.19 0.0008 mg/sample mg/sample 0.182 mg/m3 0.00077 mg/m3 0500 7300M

The laboratory blank sample was above the reporting limit for Cr

(0.0006 mg/sample). The resutts were not blank corrected.

Final sample concentrations calculated from air volumes supplied on chain of custody.

< Indicates less than the limit of quantitation.

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#### ENVIRONMENTAL TESTING

-EPA/NVLAP 101262-0

• AIHA ACCREDITATION NO. 100439

• NY DOH 10903 → PA DER 06-353

• NJ DEP 77678

## **ANALYTICAL REPORT**

Client:

Sevenson Environmental Services, Inc.

Project:

197013

Report to:

Adam Hibbard

Received:

20-SEP-00

Sevenson Environmental Services, Inc.

Reported:

25-SEP-00

51 Eames Street

Willimington MA 01887

Project Description:

Dust and Chromium Analysis

	RESULT	UNITS	METHOD	DATE	ANALYST
502617NP9-14A Lab Sample: 1420185					
Particulate, Total Chromium, Total	0.35 0.0006	mg/sample mg/sample	0500 7300M	21-SEP-00 09-SEP-00	JDC JLH
538902WP9-14A Lab Sample: 1420186					
Particulate, Total Chromium, Total	< 0.10 0.0007	mg/sample mg/sample	0500 7300M	21-SEP-00 09-SEP-00	JDC JLH
538580EP9-14A Lab Sample: 1420187					
Particulate, Total Chromium, Total	< 0.10 0.0006	mg/sample mg/sample	0500 7300M	21-SEP-00 09-SEP-00	JDC JLH
522909SP9-14A Lab Sample: 1420188					
Particulate, Total Chromium, Total The Laboratory Blank Sample was above the rep (0.0006 mg/sample). The resutis were not bia		mg/sample mg/sample Cr	0500 7300M	21-SEP-00 09-SEP-00	JLH JDC

<sup>&</sup>lt; Indicates less than the limit of quantitation.

# DAILY AIR MONITORING SUMMARY - PUMP CALIBRATION DATA

SITE LOCATION:

Clin Corp Joh Site E672 Health & Safety Officer:

DATE: 819100

WEATHER: Sunny-Temp! 75-85% Homed

	PUMP NUMBER	PRESAMPLE FLOW RATE	POSTSAMPLE FLOW RATE	AVERAGE FLOW RATE	TOTAL SAMPLE TIME	VOLUME AIR COLLECTED (LITERS)	TUBE LOT NO.	SAMPLE I.D. NO.
1.	538580	1.85Lpm	1.75 LPM	1.80 LPM	585 mm.	1053		538580 W2-8/9 522909 DW 8/9
2.	522909	1.85LPM	1.704PM	1.775 1275LPM	585 min.	1038.4		522909 DW8/9
3.	583299	1.85LPM	1.81 LPM	1.83 LPM	585min.	1070.6		583299PN8/9
4.	538902	1.854M	1.76 LPM	130.5LPM	585min.	1055.9		538502PS8/9
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IIM:HEALTH/CORP/FORMS/PUMPCAL

SITE LOCATION:	Health & Safety Officer:	DATE: 8/1/2/00
Olin Cry. E672	Adan Hilbsert	

WEATHER:

Sunny 65-80 9=

	PUMP NUMBER	PRESAMPLE FLOW RATE	POSTSAMPLE FLOW RATE	AVERAGE FLOW RATE	TOTAL SAMPLE TIME	VOLUME AIR COLLECTED (LITERS)	TUBE LOT NO.	SAMPLE , I.D. NO.
1.	502617	1.80	1.80	1.80	350	630		502617WZ8-
2.	583299	1.84	1.74	1.00	350	560		583299 DW 8-17 A
3.	522909	1.78	1.82	1.80	350	630		522909 UW8-17A
4.	538902	1.56	2.29	1.92	350	672		538902688-17A
5.	538580	1.12	2.68	1,90	350	665		538580 WP8-17A
6.								
7.					·			
8.								
9.					·			
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11.					:			
12.								

IIM:IIEALTII/CORP/FORMS/PUMPCAL

	LOCATION:		Health & Safe	ty Officer: . Hibbard		DATE: 8 /	21,00				
			<i>7\$</i> ₹		izdam myöriri mad virin ma						
EA	EATHER: Sunny, Clear 55-70°F Wind from the North										
	PUMP NUMBER	PRESAMPLE FLOW RATE	POSTSAMPLE FLOW RATE	AVERAGE FLOW RATE	TOTAL SAMPLE TIME	VOLUME AIR COLLECTED (LITERS)	TUBE LOT NO.	SAMPLE I.D. NO.			
	538902	1.53	1.48	1.505	617 MM	928.6	·	538902WZ8-ZI-A			
	522909	1.78	1.72	1.75	617 min	1079.8		522909 DW 8-21-A			
<u>.</u>	538580	1.10	1./3	1.115	617ma	688.0		538580UW8-21-A			
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ILTH/CORP/FORMS/PUMPCAL

		$a_{1,j}$						
SITE LOCATION: Of Corp.			Health & Safety Officer: Adam Hibbard			DATE: 8110100		
Start time 0800								
WEA'	THER: Sunn	1 Tremp	75-8.	s ) = 升	uniel			
	PUMP NUMBER	PRESAMPLE FLOW RATE	POSTSAMPLE FLOW RATE	AVERAGE FLOW RATE	TOTAL SAMPLE TIME	VOLUME AIR COLLECTED (LITERS)	TUBE LOT NO.	SAMPLE I.D. NO.
1.	538 <b>5</b> 0	1.12	1.13	1.125	510 min	573.75		538580WZ8/10
2.	522.909	1.82	1.79	1.805	SIDMIN	920.55		522 909 DW 8/10
3.	58 3299	1.85	1.82	1.835	510min	935.85		5832 99PN8/10
4	538902	1.55	2.28	1.915	Siomin	976.65		538902PS 8/10
5.	502617	1.85	1.77	1.81	510min	923.1		502617 UW 8/16
6.								
7.							<u></u>	
8.		THE CONTRACTOR OF THE CONTRACT	PARTY STATEMENT			·		

IIM:HEALTH/CORP/FORMS/PUMPCAL

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Barrier state and the state of		/ <u></u>
SITE LOCATION:  Olin WO E672	Health & Safety Officer:  Adam Hibbard	DATE: 8 15 100
	pre'	
WEATHER: A. O	:1	·

Cloudy

	PUMP NUMBER	PRESAMPLE FLOW RATE	POSTSAMPLE FLOW RATE	AVERAGE FLOW RATE	TOTAL SAMPLE TIME	VOLUME AIR COLLECTED (LITERS)	TUBE LOT NO.	SAMPLE I.D. NO.
į.	583299	1.83	1.89	1.86	570 Min	1060.2		583299EP8-15A
2.	538580	1.18	1.14	1.16	570 min	661.2		538580WP8-15A
3.	538902	1.57	2.32	1.945	570min	1108.65		538907WZ8-15A
4.	502617	1.85	1.83	1.84	570min	1048.8		502617UW8-15A
5.	522909	1.82	1.81	1.915	570min	1034.55		522909 DW8-15 A
6.				,				577509 DUS-15 A
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12					THE PROPERTY OF THE PROPERTY O			

M:HEALTH/CORP/FORMS/PUMPCAL

8/15 Short time 07:30

SITE LOCATION:  Clin Corp. E 672			Health & Safety Officer:			DATE: 8/23/00		
WEA'	THER: Sunny	65-	80 515	Wind N	E			
Ŀ	PUMP NUMBER	PRESAMPLE FLOW RATE	POSTSAMPLE FLOW RATE	AVERAGE FLOW RATE	TOTAL SAMPLE TIME	VOLUME AIR COLLECTED (LITERS)	TUBE LOT NO.	SAMPLE I.D. NO.
1.	522909	1.83	172	1.775	.625	1107.4		522909UP8-23A
2.	538902	1.55	1.420	1.50.S	625	940.6		5387020W8-23A
3.	538580	1.12	1.10	1.11	625	8,293		538580N28-23A
4.	588299	1.82	195	1.835	625	1146.9		5832 97 WP8-23A
5.	502617	1.78	1.65	1.715	625	1071.9		5016/189 8-23A
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12. IL: HEALTH/CORP/FORMS/PUMPCAL

SITE LOCATION:	Health & Safety Officer:	DATE: 8 124 100
Olin Corp. E672	Adam Hibbard	

### WEATHER:

IM:HEALTH/CORP/FORMS/PUMPCAL

	PUMP NUMBER	PRESAMPLE FLOW RATE	POSTSAMPLE FLOW RATE	AVERAGE FLOW RATE	TOTAL SAMPLE TIME	VOLUME AIR COLLECTED (LITERS)	TUBE LOT NO.	SAMPLE I.D. NO.
dament •	502617	1.74	1.70	1.72	560	963.2		5.2617WP8-24A
2.	538580	1.81	1.76	1.785	560	999.6		538580UW8-24A
3.	538902	1.83	1-77.	1.80	560	1008		538902 DWS-24A
4.	583259	1.84	1.81	1.825	560	1022		5 532 99 EP8-24A
5.	522909	1.82	1.77	1.795	560	1005.2		522909628-24A
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SITE LOCATION:	Health & Safety Officer:	DATE: 8 125100
Olin Corp E 672	Adam Hibbard	

WEATHER: Sunny

HMHEALTH/CORP/FORMS/PUMPCAL

	PUMP NUMBER	PRESAMPLE FLOW RATE	POSTSAMPLE FLOW RATE	AVERAGE FLOW RATE	TOTAL SAMPLE TIME	VOLUME AIR COLLECTED (LITERS)	TUBE LOT NO.	SAMPLE : I.D. NO.
1	502617	1.78	1.72	1.75	478	836.5		502617WZ8-25 A
2.	538102	1.47	1.39	1.45	478	683.54		538902WP8-25A
3.	522509	1.81	1.79	1.80	478	860,4		5229090W8-LSA
4.	538580	1.12	1.09	1:105	478	528.19		538580NM8-52
5.	583299	1.16	1.83	1.845	478	881.41		5832996PP-25A
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SITE LOCATION:			Health & Safety Officer:			DATE: 6 126100			
WEATHER: Sunny Humin		Adam Hilboard							
WEA'	THER: Simn	7 Humis				<u>.</u>			
	PUMP NUMBER	PRESAMPLE FLOW RATE	POSTSAMPLE FLOW RATE	AVERAGE FLOW RATE	TOTAL SAMPLE TIME	VOLUME AIR COLLECTED (LITERS)	TUBE LOT NO.	SAMPLE I.D. NO.	
1.	583299	1,85	1.83	1.84	540	993.6		583299 DW8-26A	
2.	538580	1.09	1.10	1.095	540	511,3		538580 UW 8-26 A	
3.	522909	1.81	1.80	1.805	54°	974.7	-	527509 NP8-26 A	
4.	538502	1.45	1.47	1.46	540	788.4		5389025p8-26 h	
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W:HEALTH/CORP/FORMS/PUMPCAL

SITE LOCATION:  Oin Corp. E672	Health & Safety Officer:	DATE: <u>\$ 128 100</u>
	Adam Hibbard	

WEATHER:

Partly Sunny

	PUMP NUMBER	PRESAMPLE FLOW RATE	POSTSAMPLE FLOW RATE	AVERAGE FLOW RATE	TOTAL SAMPLE TIME	VOLUME AIR COLLECTED (LITERS)	TUBE LOT NO.	SAMPLE I.D. NO.
1,	583199	1.06	1.81	1.835	420 Min	1137.7		583299628-284
2.	502617	1.82	1.80	1.81	620	1122.2		502617W18-28A
3.	538902	1.47	1.45	1,46	620	905.2		534 902EP8-28A
4.	538580	1.13	1.12	1.125	620	697.5		53858DDW8-28A
5.	522909	1.89	1.88	1.885	620	1168.7		522-909UW8-28 A'
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IIM:HEALTH/CORP/FORMS/PUMPCAL

SITE LOCATION:	-	H
12.		

Health & Safety Officer:

DATE: 8 129 1 00

WEATHER:

Sunny

PUMP NUMBER PRESAMPLE FLOW RATE FLOW	
1. 522.909 1.78 1.74 1.74 604 1063.04 522.909 EPS  2. 502617 1.81 1.79 1.80 604 1087.2 502617 WPS-  3. 583299 1.84 1.80 1.82 604 1095.28 583299NPS-	
2. 502617 3. 583299 1.84 1.80 1.82 604 1087.2 502617 WP8-14. 538580 1.17 1.09 1.85 604 1095.28 5831.19NPS-	
3. 583299 1.84 1.80 1.82 604 1087.2 SOLGIT WP8- 4. 538580 1.17 1.09 1.85 604 1095.28 5831.19NPS-	527 A
538580 1.17 1.09 1.55 COY 1095.28 583119NPS	29 A
150 5385801179	
115.11 1538 102 1.48 1.45 1.465 boy 884.86 53 \$ 102 Sp 2-	E T
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IM:HEALTH/CORP/PORMS/PUMPCAL	

SITE LOCATION: Olin Remediation E672			Health & Safety Officer:			DATE: 11 12 100			
Test	prt excavation v	) Nort Plant B	Adam Hibbard						
•		15°F-60°F				7			
	PUMP NUMBER	PRESAMPLE FLOW RATE	POSTSAMPLE FLOW RATE	AVERAGE FLOW RATE	TOTAL SAMPLE TIME	VOLUME AIR COLLECTED (LITERS)	TUBE LOT NO.	SAMPLE 1.D. NO.	
1.	538580	1.52	1.51	1.515	6.00	909		55550NB 11-2	
2.	538902	1.87	1.76	1.785	600	1071		538902EP11-2	
3.	583299	1.46	144	1.45	600	870		583299NGP11-2	
4.									
5.									
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12.	LTH/CORPIFORMS/PUMPCAL								
SHEA	L'INCORPIPORMS/PUMPCAL		•				•		

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ITE LOCATION: Olin Remediation	Health & Safety Officer: Alam Hibbard	DATE: 10 121 100
Boutonite MIXING		
VEATURED. CL.		

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ŧ	PUMP NUMBER	PRESAMPLE FLOW RATE	POSTSAMPLE FLOW RATE	AVERAGE FLOW RATE	TOTAL SAMPLE TIME(hu)	VOLUME AIR COLLECTED (LITERS)	TUBE LOT NO.	SAMPLE 1.D. NO.
1.	53890r	1.44	1.40	1.42	378	536.16		5389025W 10-27
2.	538580	1.05	1.04	1.045	378	395.01		5 38580 SCM 1027
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1:HEAL	TH/CORP/FORMS/PUMPCAL	•			•	··· <del>-</del>		

TE LOCATION:			Health & Safety Officer:			DATE: 11/1/00			
2µ :st	LOCATION:  n Remediation  Chompson  puts-white tree  Cloudy  PUMP NUMBER	neg)	Adam	Hobbard				· ·	
EA'	THER: Cloudy					**			
	PUMP NUMBER	PRESAMPLE PLOW RATE	POSTSAMPLE PLOW RATE	AVERAGE FLOW RATE	TOTAL SAMPLE TIME (149)	VOLUME AIR COLLECTED (LITERS)	TUBE LOT NO.	SAMPLE I.D. NO.	
	572909	1.83	1.80	1.875	413	749.60		52290 NESP 11-1	-
	538580	1.05	1.04	1.045	4/3	431.59		538580NB (1-1	****
•	538902	1.46	1.45	1.455	413	600.92		538902 ESP 11-1	
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IEALTH/CORP/FORMS/PUMPCAL

ITE LOCATION:			Health & Safet	y Officer:		DATE: 9 1 14 100			
011	n Remediati	~	Arla	im Hib	bool				
VEA'	THER: Most	y Sunny	•					`	
	PUMP NUMBER	PRESAMPLE FLOW RATE	POSTSAMPLE FLOW RATE	AVERAGE FLOW RATE	TOTAL SAMPLE TIME	VOLUME AIR COLLECTED (LITERS)	TUBE LOT NO.	SAMPLE I.D. NO.	

•	PUMP NUMBER	PRESAMPLE FLOW RATE	POSTSAMPLE FLOW RATE	AVERAGE FLOW RATE	TOTAL SAMPLE TIME	VOLUME AIR COLLECTED (LITERS)	TUBE LOT NO.	SAMPLE I.D. NO.
<b>.</b>	538580	1.05	1.02	1.03.5	620	64.7		538580EP9-14 A
2	522909	1.85	1,84	1.845	620	1143.9		522 909589-14A
3.	538 902	1.46	1. 41	1.435	620	889.7		588902WP9-14A
4.	502617	1.76	1.69	1.745	620	1070.74		502617NP9-14A
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6.		·			.41			
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HEALTH/CORP/FORMS/PUMPCAL

	LOCATION:	un E67Z	Health & Safet	y Officer:	J	DATE: <u>9</u> 1	7 100				
·	<b>3</b> 1	·:	tradi								
WEA	WEATHER: Cool, clear										
	PUMP NUMBER	PRESAMPLE RIOW PATR	POSTSAMPLE RLOW BATR	AVERAGE	TOTAL SAMPLE	VOLUME AIR	TUBE	SAMPLE			

	PUMP NUMBER	PRESAMPLE FLOW RATE	POSTSAMPLE FLOW RATE	AVERAGE FLOW RATE	TOTAL SAMPLE TIME	VOLUME AIR COLLECTED (LITERS)	TUBE LOT NO.	SAMPLE I.D. NO.
1.	538580	1.73	1-71	1.72	606	1042.32		538580 NP9-7A
2.	522909	1.81	1.079	1.80	606	1090,8		522904 SP 9-7A
3.	538902	1.83	1.77	1.80	600	1010.8		538502W19-7A
4	502617	1.75	1.69	1.72	600	1042.72		502617 Epg-7A
5.			,					•
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IM:HEALTIL/CORP/FORMS/PUMPCAL

SITE LOCATION: Health & Safety Officer: DATE: 8/30/00

Olin Gorp. E672 Adam Hubbard

WEATHER:

IIM:IIEALTII/CORP/FORMS/PUMPCAL

Mostly Sunay

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·	PUMP NUMBER	PRESAMPLE FLOW RATE	POSTSAMPLE FLOW RATE	AVERAGE FLOW RATE	TOTAL SAMPLE TIME	VOLUME AIR COLLECTED (LITERS)	TUBE LOT NO.	SAMPLE 1.D. NO.
1.	502417	1.79	1.72	1.755	636	1116.18		502617 WP8-50A
2.	522109	1.90	1.75	l.775	634	1128.9		5229096194-30A
3.	583279	1.83	1.80	1.815	636	1154.54		543299 NP8-304
4.	538580	1.12	1.07	1.095	636	656.42		538580 WE8-30A
5.	538102	1.51	1.48	1.495	b36	950.8€		538907 598-70A
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SITE	LOCATION:	į.	Health & Safe	: 1	DATE: 916100						
	Corp. Remedia	tus	Adam	Hibbard							
	PUMP NUMBER	PUMP NUMBER PRESAMPLE FLOW RATE FLOW RATE		AVERAGE FLOW RATE	TOTAL SAMPLE TIME	VOLUME AIR COLLECTED (LITERS)	TUBE LOT NO.	SAMPLE I.D. NO.			
1.	583299	1.83	1.80	1.815	612	1110.78		583299 NP9-6A			
2.	52550	1.11	(.40	1.105	lecz	676.26		522909 EP9-6A			
3.	538 Por	1,43	1:"39	1,41	612	862.92		538902 SP9-6A			
4.	502617	1:74	1.71	1.725	612	1055.7		502617 WP 9-6A			

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2. HEALTH/CORP/FORMS/PUMPCAL

TO-1-A/TOTO GO/MS Volations Report

sample:	Phillip 166845 Sevention SYV			atters ric		Dil. Fect: 2.0		
Jisc:	nation of: 500ml; can 12301			•			:	5970140
	F-1001S:	File: C	HIPCHEMI	W400.	1414119.D		Reporting	
							Limits	IS/St
Cmpd#	Compound	CAS	# R.T.	Q ton	Arex	ppby	ppby	Resov
	Chioropenzene-d5 (IS)		15.0			50.0		100
1 2	Dichlorodifiuoromethane (12)	75-71-8				ND		
	Chloromethane	<b>74-</b> 87-3				ND	1.3	
3	1,2- Ci-1,1,2,2-F ethane (114)					ND	1.3	
4	Vinyl chloride	•75-01-4	0.0			NO	1.3	
5	1.3-Butadiene	106-99-			. 0	ND	1.3	
6 7.	Bromomethane	74-83-9	D.D		D	ND	1.3	
7. 8	Chlorogihane	75-00-3	0.0		0	סא	1.3	
9	Trichlorofluoromethane (11)	75-69-4	0.0		ō	ND	1.3	•
	1.1-Dichloroethene	75-35-4	0.0		Ö	ND	1.3	
	1.1.2- Cl 1.2.2- F ethane (113)	76-13-1	. 0.00		ō	ND	1.3	
	Methylene Chloride	75-09-2	0.00		. 0	ND	1.3	
	1.1-dichloroethane	75-34-3	0.00	•	D	ND	1.3	
	Methyl t-butyl ether (MTBE).	1534-04-			0	ND	1.3	
	cis-1,2-Dichloroothene	156-59-2			. 0	ND	1.3	
	•	150-56-2	9.76		330238	47.1		94%
	Bromochloromethane (SS) Chloroform	67-65-3	0.00		33UZ30 0	ND	1.3	<i>⊅</i> ~ 70
	1.1,1-Trichtoroethane	71-55-6	0.00		0	ND	1.3	
	1.1, 1-1 richtoroethane	107-06-2			0	ND	1.3	
-	Carbon tetrachloride	56-23-5			٥	מא	1.3	
	•	50-23-3 71 <b>-</b> 43-2	0.00		110135	2.0	1.3	
_	Benzene	11-40-5	11.23 11.81			39.9	1.5	80%
	1,4-Diffuorobenzene (SS)	78-01-6	0.00	114.00 130.00	1352369 0	33.5 ND	1.3	PO 18
,	Trichloroethene	78-37-5	0.00	63.00	0	ND	1.3	
	I,2-dictrioropropane is-1,3-dictrioropropane	542-75-6	0.00 0.00	75.00		ND	1.3	
	oluene:	108-88-3	14.22	91.00	212424	3.2	1.3 :	
	rans-1,3-dichloropropene	10061-02-		75.00	0	ND	1.3 .	
	.1,2-Trichloroethane	79-00-5	0.00	97.00	٥	ND	1.3	
	etrachioroethene	127-18-4	0.00	164,00	ט	ND	1.3	
	2-Dibromoethane	106-83-4	0.00	107.00	Ö	סא	1.3	
	pioopeuzaue	108-90-7	0.00	112.00	ő	ND	1.3	
	thyl beazene	100-41-4	16.70	91.00	32364	ND	1.3	
	,p-Xylene	1330-20-7		91.00	79323	ND	1.3	
	Xylene	95-47-6	17.44	91.00	40903	ND	1.3	
•	yrans :	100-42-5	0.00	104.00	a	NO	1.3	
	1,2.2-Tetrachloroethane	78-34-5	0.00	83.00	Ö	מא	1.3	
	omofiliorobenzene (SS)		17. <b>99</b>	∞.00 95.00	687399	47.0		94%
	3.5-Trimethylbenzene	1C3-57-8	19.13	105.00	2525 <b>8</b>	מא	1.3	
	5,5-thmethyberzene 2,4-Trimethylberzene	95-63-6	19.85	105.00	23534	ND	1.3	
	3-Dichlorobenzena	541-73-1	0.00	145.00	20007	ND	1.3	
	enzyl chloride	100-44-7	19.51	91.00	28960	ND	1.3	
	-Dichlorobenzene	106-48-7	0.00	146.00	20300	ND	1.3	
	?-Dichlorobenzene	B5-50-1	0.00	146.00	Q	ND	1.3	
	2.4-Trichlorobenzene	120-82-1	0.00	180.00	a	ND	1.3	
	xachlorobutadiene	87-68-3	0.00	225.00	0	NO	1.3	
					ses L69236. 1			

8/10/00 10:01 AM

Report TO-15RFT3\_XLS

Date Printed: 8/10.

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SP8-1 Fused Silicat: Nutech -5C Tenax/Anasorb Trap; Oven: -50 for 2m to 150 @ 8/m

<sup>&</sup>quot;Note that 1,3-butackine and MTBE are TO-15 compounds only and not TO-14 largets."

DII. Fact: 1.7 Autosempler: 2 Philip 196:45 Sercoson SE Silia 8/2/01 nation of, 500ml, can 0183 5970MS( Misc: CAMPOHEMANASO. 1414120.D Ruportina Mother: 8400IS File: Limits 15/Su-CAS # ppby Area Area ppby Cmpd ♯ Compound F. T. Q ion Recove -1354070 50.0 100% Chloroberzene-d5 (IS) 15.09 117.00 2 75-71-8 19110 ND 0.8 Dichlorodinuoromethane (12) 2.20 25.00 7487-3 0.00 52.00 Ö ND 0.5 3 Chloromethane 0 ND 4 1,2- Cl; 1,1,2,2-F ethanc (114) 78-14-2 00.0 85.00 0.8 0 ND 8.0 75-01-4 5 Vinvi chioride 0.00 62,00 0 ND 0.8 1.3-Buladiene 708-99-0 6 0.00 54.00 Đ 0.8 7 Bromomethane 74-83-9 0.00 94,00 ND 75-00-3 0.00 0 ND 0.8 8 Chloroethane 64.00 ND ₽ Trichlotofluoromethane (11) 75-69-4 6.13 13797 0.8 101,00 ND 1,1-Dichloroethene 75-35-4 0.00 0 0.8 10 61.00 1,1,2- ¢l 1,2,2- F ethans (113) 0 76-13-1 0.00 ND 0.8 11 151.00 Methylene Chloride 10576 75-09-2 7.50 ND 0.8 12 84.00 75-34-3 0 ND 8.0 13 1.1-dichlorosthane 0.00 63.00 Methyl I-butyl other (MTSE) D 8.0 14 1634-04-4 0.00 73.00 ND 156-59-2 0 ND 0.8 cis-1.2-Dichloroethene 0.00 15 61.00 ... ₽.78 338575 47.9 96% 16 Bromochloromethane (SS) 130.00 17 Chloroform **67-66-3** 0.00 63.00 ø ND 0.8 1,1,1-Trichloroethane 0 0.8 71-55-5 0.00 ND 18 97.00 19 1,2-Dichloroethane 107-06-2 0.00 62.00 0 ND 0.8 Ö 20 Carbon tetractionide 56-23-5 0.00 117.00 ND 0.8 1.2 0.8 71-43-2 11.23 107616 21 Benzene 78.00 1.4-Diffuorobenzene (SS) 41.1 11.81 1405741 82% 22 114.00 Trichloreethene 23 79-01-6 0.00 130,00 0 ND 0.8 1.2-dichloropropane 78-87-5 0.00 83.00 0 ND 8.0 24 0.00 ND 0.8 25 cts-1,3-dichioropropens 542-75-6 75.00 0 258895 2.4 Q.8 26 Toluene 108-88-3 14.22 91.00 ND 27 trans-1,3-dichloropropene 10061-02-6 0.00 75.00 0 0.8 QN 0.8 28 1,1.2-Trichioroethane 79-00-5 0.00 97.00 0 Tetrachibroethene 127-18-4 15.39 11932 ND 8.0 29 184.00 1.2-Dibromoethane 106-83-4 0.00 107.00 0 ND 0.8 30 ND 0.8 0.00 0 31 Chlorobenzene 108-90-7 112.00 Ethyl beszene 32 100-41-4 16.71 91.00 48681 ND 8.0 33 m\_p-Xylene 1330-20-7 16.91 115123 ND 0.8 91.00 o-Xylenei 34 95-47-6 17.44 47005 ND 0.8 **91.00** 100-42-5 0.00 NO 0.8 35 Styrene: 104.00 0 79-34-5 0.00 83,00 O ND 0.8 38 1,1,2.2-Tetrachiomethane 47.3 **95%** 37 Bromofluorebenzene (SS) 17,99 95.00 697745 0.8 38 1,3.5-Trimethylberizene 108-67-8 18.29 105.00 29907 NO 1.2.4-Trimethylbenzene 105.00 ND 0.8 39 95-63-6 19.84 44440 NO 6.0 1,3-Dichlorobenzene 541-73-1 0.00 146.00 0 40 0.8 41 Benzyl chloride 100-44-7 19.51 91.00 11558 ND 8.0 42 1.4-Dichlorobenzene 106-45-7 0.00 146.00 Ø NO 1.2-Dichlorobenzene 0.00 Đ ND 0.8 43 95-50-1 148.00 0.8 44 1.2.4-Trichiorobenzene 120-82-1 0.00 180.00 0 ND ND 0.8 **Hexachlotobutadiene** 0.00 225,00 0 45 87-68-3

Calibration Data: NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv
615\_10N.D 615\_20F.D 615\_30F.D
Date Primed: 8/10/00 10:00 AM Report: TO-15RPT3\_XLS

NO = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS < Internal Standard 50 ng each

Col:SPB-1 Fused Silica; Nutsch: -5C Tenex/Anseorb Trap; Oven: -50 for 2m to 150 to 8/m

<sup>&</sup>quot;Note that 1,3-butadene and MTBE are TO-15 compounds only and not TO-14 targets."

AIR MONITORING
Summa Canisters - Olin Drum Phase, Wilmington, MA

Job # E 672

	Start	Stop	Canister		Final Vacuun
Date	Time	Time	Number	Location	Reading_
9-7-00	0715	100	93081	Sw of drum Acea A	2.2
	}		A301	East of First yell to biccell	10.0
	L	14	12018	North of twens	0.0
9-7-00	0715	1706	12467	North of concrete soil paral	0-0
9-8-00	0730	1715	12155	Swof drum Area A	2.5
1	1		93218	East of First gate to biocell	11.3
L	*	V	12-638	North of Ace &	12.5
9-8-00	07 32	בערו	(7830	North of owerese soil park	0.0
9-11-00	1000	1715	93020	Swaf don Area A	<u> </u>
		}	93229	East of First gate to be call	0.0
	V	(	9428BB	North of Area &	ರಿ. ಶ
7-11-0	000	128	9605 B	North of ancrete soil peal	14.0
9-13-00	1030	1830	93294	SW . A dam Area A	<u> 14. s</u>
	<u> </u>	1	A301	Fact of First gate to hocel	3. <i>5</i>
V	V	V	93348	North of coverete soil pad	16.3
3-00	10300	1830	12256	North of America	0.0
.9.00	0800	1715	93754	5w of dua Area A	15.0
			93120	East of First gate to bis only	<u> 1/.5</u>
	4		12533	North of concrete Soil paul	0.2
9-18-00	0800	1715	93047	North of Are B	2.0
9-28-00	97/ <sub>13</sub>	1732	11344	North side of Biocen (uponed)	O. J
	Υ	1732	93242	South side of Brock I damy of	<u> </u>
	4	1732	11412	North side of extinent Debris Afre	<u>/5.0</u>
9-28-00	0710	1730	0183	Soth sol of solvent record then	၁. ဇ
9-74-00	0730	1-30	92044 x	North side of Bis cell (comme)	00
		İ	92075 -	South side of this cell ( former b)	0.0
Ů.		Ÿ	G3178 Y	No-th side of separations And Ival	
17-19-00	<i>073</i> 3	1730	12488	South side of Debris An-1001	3,o
10-2-00	J030	1715	1(373	North side of Bio sell (upusal)	
	1	l	9624 B	Som side of Rao cell ( Downward)	
	V		04324	North side of Dobris Aren Un	
2-2-00	1050		43274	West side of Debis Area of	
L U	ل ا		927988	South side of Dabris Area DW	
10-2-00	1030	1915	A291	ASTRIAL OF Dobres Area	
1	<u> </u>				

(3.73)

DIMERCHANIS



- WANN AN PURENT OF THE

## ANALYTICAL REPORT

Client:

Sevenson Environmental Services, Inc.

Project:

195645

Report to:

Mark Nicklas

Sevenson Environmental Services, Inc.

2749 Lockport Road

P.O. Box 396

Niagara Falls NY 14304

Received: Reported:

04-AUG-00 17-AUG-00

Project Description:

Olin Remediation

TO-15 plus Lib. Search

Sampled: 02-AUG-00 17:45

RESULT

UNITS

METHOD

DATE

ANALYST

#12301 S.W. Comer Lab Sample: 1414119

See Attached Report

#0183 S.E. Side

Lab Sample: 1414120

See Attached Report

#11412 Pad Area

Lab Sample: 1414121

See Attached Report

#93242 (Upwind)

Lab Sample: 1414122

See Attached Report

<sup>&</sup>lt; Indicates less than the limit of quantitation.

AIR MONITORING
Summa Canisters - Olin Drum Phase, Wilmington, MA

Job # E 672

	Start	Stop	Canister		Final Vacuum
Date	Time	Time	Number	Location	Reading
8-2-00	0945	17 45	12301	NORTH SIDE OF DRYMARGA A	70 5
		1	0183	NORTH SIDE OF DRYM AREA B	0,0
		<u> </u>	11412	HORTH SIDE of DEBRIS/SOIL PAD	7.5
8-2-00	0945	1745	93242	upwino	10,0
		- `			
8-7-00	10800	1600	12474	NORTH S'IDE OF DRYA AREA A	10,5
	++		809	MORTH SIDE OF DRUM AREA B	9.0
		<u> </u>	93294	NORTH SIDE of DEBRIS/soil PAD	8.0
8-7-00	10800	1600	12630	UPWIND	10.1
A 0 0 0					
8-8-00	0730	1730	12256	MORTH SiDE OF DRUM AREA A	10.0
			A 304	NORTH SIDE of DRUM AREA B	10.0
19.00	· ·	<u> </u>	9102B	NORTH SIDE of DEBRIS/SOIL PAD	0,0
8-8-60	, , , , , , , , , , , , , , , , , , , ,	1730	9334B	u P Wid O	6.6
10-9-00	0794	1730	<del>(</del>	North side of drum area A	<u></u>
		1730	12638	KORTH SIDE OF DRUM AREA B	10. S
8-9-00	A 340		0164	NORTH SIDE OF DEBRIS/SILL PAO	9.2
8-10-00		1530	12618	upuito	7.5
h	1 / 2 8		12467	North side of drim area to	······································
	J		93081	North Side of drim area B North Side of dellas bout Pad	0.0
8-10-00	0730	1530	A301	Upwind Dearie Soil For	4.0
8-15-00		1700	93023	North side of hour area A upwind)	4.4
1	1		93498	North sile of Armare B	6.3
<b>U</b>	1		11373	North side of debris/solpad	13.7
8-15-00	0700	1700	96 Z4 B	Howard On land to board (daming)	13. 2
8-16-00	7700	1000	12163	North side of drin area A	18.3
		1	04310	North side of dring great	762
<u> </u>	<u> </u>	<u> </u>	12300	North sile of soil park	21.3
3-1b-00		1000	93078	On Road new first gate.	16.2
8-17-00	0730	1500	12610	North side of dim area A spump	* 2.5
			A 305	North side of D.A.B	15.5
	<u> </u>	<u> </u>	12832	North of Soil pad	22.4
8-17-00	0730	1500	93714	on road rear first gate blanumd!	<u> ර</u> . ව

AIR MONITORING
Summa Canisters - Olin Drum Phase, Wilmington, MA

Job # E 672

	Start	Stop	Canister		Final Vacuum
Date	Time	Time	Number	Location	Reading
8-22-00	07:5	1800	104162	North of pad	3. 0
Ī			02302	North of B.	5.0
V	1	1	9354B	upunho	6.0
8-22-00	0715	1800	02316	North of A	8.0
8-23-00	0715	1730	A.301	Worth of B (pumpl)	0.0
* 114			12467	Macta of PAD	0.0
V	<u> </u>	<b>V</b>	12618	Wath of A	10.0
8-23-00	0715	1730	93081	Crate to bio pad Wownell	19.0
8-24-00	0700	1705	93256	NorthofR	10.0
			04324	Work of And	2.1
٠ - س	1	<u> </u>	9279BB	North of A	7.0
8-24-00	000	1705	93278	Gate to bis paid	0.0
8-25-0	07/5	17-30	93139	NORTH of DEBRIS /BOLL PAO	0.0
			04421	HORTH OF ARCA A	10.0
4	4		93208	MORTH OF AREA B	0.10 金数
*	6713	17-30	9209A	GATE TO BIS. PAG.	8,5
€-26-00	כיידים	1530	9153B	Morth of Debris/Sol pad	13.0
			03129	North of Are A	00
	Y	Ψ	93048	North of Aca B	8.9 · · ·
8-26-0	حمره	<u>ित्र</u>	11208	Gate to bis pal	C.O.
8-24-00	<b>10</b> 700	1000	12461	North & Debos/solped	8.2
		4	A220	Southern of Area A	41
<u> レ</u>	Ψ ]	V	93277	Hormof Area B	7.7
8-28-00	5700	1700	12424	Coate to him Paul	10,4
8-29-00	0715	1100	93054	North of Debris (soil ped	4.9
			15311	South west of Africe Br	9.8
V	4	Jr	933113	North of Arren B	11.2
8-29-00	0715	1703	04170	Est of figitact to bio pad	12,9
8-30-00	<b>07⊕∂</b>	715	93300	North of Deloris 1501 Pal	11.0
		715	8818 Q	South west of Area A	5.3
<u> レ</u>	1	1715	93,41	North of Arren B	9.7
£-30-00		راعيد	2878	Fast of first gate to be pull	13,5
8-6-00	0715	,	02316	North of Debris / Sal Pad	7.5
			93548	South West of Ance A	0.0
	<b>U</b>		02302	North of Anew XB	0.3
1 -00	0115		04162	East of first and to be part	8.0

Drum Removal RAM, Status Report No. 2 and Completion Statement Olin Corporation July 12, 2001

**VOC AND TIC DATA** 

Research Priengle Park Laboratories, Inc.

\$100 Brownleigh Prive, Suite 120 Ruleigh, NC 27617



919 310-0228 Telephone

919 510-0141 Faz

Heb Site: www.rtp-labs.com

## TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin Project No: 195645

Sample Date: 8/2/2000

Matrix: Air in Summa Canister

Analysis Date: 8/9/2000

Date Received: 8/4/2000

Sample ID:

1414119 cmister 12301 "SW Corner"

Compound

Estimated ppbv\*

Ethanol :

14

alpha-methylstyrene

18

Estimated ppbv\*

Sample ID: Compound

1414120 carister 183 "SE Side"

:	
Dimethyl ether	5
Pentane :	7
Carbon disulfide	13
Dimethyl disulfide	16
Dimethyl trisulfide	31
Camphor	37
Isopinocamphone	5
2,3,7-trimetryl occare	5

<sup>\*</sup>Estimated values were calculated against the  $d_3$ -Chlorobenzene internal standard assuming 2 1:1 response ratio.

.File: 195645.doc/als

<sup>\*</sup>Estimated values were calculated against the  $d_r$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

Research Triangle Park Laboratoria. Inc.

\$100 Brown bigh Driver, Suite 120

Puleigh, NC 27617



919 510-0224 Telephone

919510-01-1 For

Heb Sic: www.rig-labs.com

## TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services Contact: Jim Jacklin Project No: 195645

Sample Date: 8/2/2000

Matrix: Air in Summa Canister

Anzlysis Date: 8/9/2000

Date Received: 8/4/2000

Sample ID:

1414121 canister 11412 "Pad Area"

Compound	Estim=ted ppbv*						
•	- ·						
Ethanol ;	13	.\					
Dodecané	7						
2,6-dimethyl undecane	15						
2,3,7-trimethyl octane	17						

<sup>\*</sup>Estimated values were calculated against the ds-Chlorobenzene internal standard assuming a 1:1 response ratio.

Sample ID:

1414122 canister 93242 "Upwind"

Compound	Estimated poby*							
:								
3-perten-2-one	38							
4-ethyl-1,2-dimethyl benzene	45							
1-methypropyl benzene	4 I							
1-methyl-2-(1-methyethyl) benzene	<b>37</b>	,						
2-ethyl-1,3-dimethyl benzene	40							
1-chyl-2,3-dimethyl benzene	50							
2,6-dimethyl undecase	63							
2,3,7-trimethyl octane	78	AND						

<sup>\*</sup>Estimated values were calculated against the  $d_r$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

File: 195645.doc/als

TU-1441. U TO GOING TORGIES TEDOTI

Sampl	v: Philip 195845 Gevenson Fad	Area (~2/00		- A	utosampier:	ö	Di., Pust	2.3
Hi==:	nafion ps; 500ml; can 11412		•				*	5970M.UD
Method	d: 840015	File: C:V-	IPCHEM\1	1/3450i	1414121.D		Reporting	
	•	•			·	•	Limba	15/5°±#
Cmpd	# Compound	CAS #	R.T.	Q lon	Area	ppbv	ייטקק	Recove
1	Chlorobenzene-d5 (IS)		16.	1 117.00	1356554	50.0		100%
2	Dichlorpdifluoromethane (12)	75-71-8	2.2	22 85.00	15709	סא	1.1	
3	Chloromethane	74-87-3	0.0	52.00	0	פא	11	
4	1,2- Cl 1,1,2,2-F ethane (114)	76-14-2	0.0	00.25	O	סא	1,1	
5	Vinyl chloride	75-01-4	0.0	0 62.00	0	סא	1.1	
6	1,3-Buladiene	105-99-0	0.0	0 54,00	O	ND	1.1	
7	Bromomethane	74-83-9	0.0	0 94.00	. 0	ND	1.1	
8	Chloroethane	75-00 <b>-3</b>	0.0	0 84.00	0	ND	1.1	
9	Trichio ofuoromethane (11)	75-6 <b>9-4</b>	6.1	7 101.00	10595 ·	ND	1.1	•
10	1,1-Dichlaroethene	75-35-4	0.0	00.16	0	ND	1.1	
11	1,1,2- Cl 1,2,2- F ethane (113)	76-13-1	0.00	151.00	O	ND	1.1	
12	Methylene Chloride	75-09-2	7.5	84.00	10854	ND	1.1	
13	1,1-dichloroethane	75-34-3	0.00	63.00	O	ND	1,1	
14	Methyl f-butyl ether (MTBE)	1634-04-4	0.00	73.00	O	ND	. 1.1	
15	cis-1,2-Dichloroethene	156-59-2	0.00	61.00	· 0	ND	1.1	
16	Bromochioromethane (SS)		9.78		322128	45.5		91%
17	Chloroform	<b>67-66-</b> 3	0.00		0	ND	1.1	
18	1,1,1-Tachloroethane	71-55-8	0.00		0	סא	1.1	
19	1.2-Dichloroathane	107-06-2	0.00		0	סא	1.1	
20	Carbon ketrachloride	56-23-5	0.00		0	ND	1.1	
21	Benzené	71-43-2	11.26	78.00	93812	1.4	1.1	
22	1.4-Diffuorobenzene (SS)		11.83	114.00	1467710	42.9		86%
23	Trichlorpethene	79-01-6	0.00	130.00	0	ND	1.1	
24	1,2-dichloropropane	78-87-5	0.00	63.00	0	QM	1.1	
25	cis-1,3-dichloropropene	542-75-6	0.00	75.00	Ø	ND	1.1	
26	Toluene	108-88-3	14.22	91.00	328143	4.2	1.1	
27	trans-1,3-dichloropropene	10061-02-6	0.00	75.00	٥	ND	1.1	
28	1.1.2-Trichioroethane	79-00-5	0.00	97.00	O	ND	1.1	
29	Tetrachiproethene	127-18-4	0.00	184.00	0	ND	1.1	
	1,2-Dibromoethane	106-93-4	0.00	107.00	0	ND	1.1	
31 (	Chlorobenzene	108-90-7	0.00	112.00	0	ND	1.1	
	Ethyl benzene	100-41-4	16.71	91.00	69689	ND	1.1	
	n.p-Xylene	1330-20-7	16.93	81.00	181620	מא	1,1	
34 c	>-Xylenė	<b>85-47-8</b>	17.46	91.00	55850	ND	1.1	
35 8	Styrene	100-42-5	0.00	104.00	0	ND	1.1	
18 1	.1.2.Z-Tetrachloroethane	79-3 <b>4-5</b>	0.00	83.00	0	ND	. 1.1	
17 B	Iromatidorobenzane (SS)		18.01	95.00	703510	47.5		95%
8 1	.3.5-Trifnethylbenzene	108-67-8	19.32	105.00	21773	ND	1.1	,
9 1	.2.4-Trimethylbertzene	95-63-6	19.85	105.00	42684	ND	1.1	
	,3-Dichlorobenzene	541-73-1	0.00	146.00	0	ND	1.1	
	enzyl chicnde	100-44-7	20.50	91.00	54100	1.4	1.1	
	4-Dichlorobenzene	108-48-7	0.00	148.00	Q	ND	1.1	
	2-Dichiprobenzene	<b>95-50-1</b>	0.00	146.00	O	ND	1.1	
	2,4-Trichlorobenzene	120-82-1	0.00	180.00	O	ND	1.1	
5. H	exachlorobutadiene	87-68-3	0.00	225.00	0	סא	1.1	

: 615\_10N.D

615\_20F.D 8/10/00 9:54 AM 615\_30F.D

Date Printed: 8/10
ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard: IS = Internal Standard 50 ng each

Report TO-15RPT3.XLS

Col:SPB-1 Fused Silica: Nutech: -5C TenaziAnesoro Trap: Oven: -50 for 2m to 150 @ 8/m

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Auto-inplan 7 Dil. Fact: 2.6 Sample: Philip 195545 Sevension Upvand 6.72/09 mason of, 500ml; can 93242 S\$70MUT AllEC: C:\HPCHEM\1\\$400\ 1414122.D Reporting Method: 610015 F114; Limits IS/Sur Cmpd ≠ CA.3 # RT. Qion Arsa ppby ppbv Recove Compound 117.00 1351478 50.0 ٠ſ Chloropenzene-d5 (IS) 16.09 100% 2 Dishlorodifluoromethane (12) 75-71-5 2.20 85.00 14281 ND 1.3 0 ND 1.3 74-87-3 0.00 52 00 3 Chloromethane 0 ND 76-14-2 0.00 1.3 4, 1,2-C|-1,1,2,2-F ethans (114) 85,00 O 5 Vinyl chloride 75-01-4 0.00 62.00 ND 1.3 0 1.3. 106-99-0 ND 6 1.3-Butadiene 0.00 54.00 Ð ND 1.3 7 Bromomethane 74-83-9 0.00 94.00 0 ND 1.3 8 Chloroothane 75-00-3 0.00 54.00 O ND 1.3 Trichloroffuoromethane (11) 75-89-4 0.00 101.00 9 75-35-4 0 ND 1.3 1.1-Dichloroethene 0.00 61.00 10 1.1.2- C11.2.2- F ethane (113) 0 76-13-1 0.00 151.00 ND 1.3 11 75-09-2 12 Methylene Chloride 7.50 64.00 15074 ND 1.3 75-34-3 ND 13 1,1-dichloroethane 0.00 €3.00 0 1.3 Methyl t-butyl ether (MTBE) 1634-04-4 0 ND 14 0.00 73.00 1.3 cis-1,2.Dichloroethene 155-59-2 0 ND 1.3 15 0.00 61.00 -45.8 323307 82% 16 Bromochloromethane (SS) 9.76 130.00 ND 1.3 Chloroform 67-66-3 0.00 83.00 0 17 97.00 ND 18 1,1,1-Trichloroethane 71-55-6 0.00 D 1.3 19 1.2-Dichloroethane 107-06-2 0.00 62,00 ٥ ND 1.3 . Carbon tetrachioride ND 20 56-23-5 0.00 117.00 0 1.3 74322 Benzene 71-43-2 11.25 1.3 1.3 21 78.00 22 1,4-Diffuorobenzene (SS) 11.81 114.00 1465355 43.0 86% Trichlospethene 79-01-6 0.00 0 ND 1.3 23 130.00 O 1.2-dictionopropane 0.00 ND 1.3 24 78-87-5 63.00 cis-1.3-dichloropropene 25 542-75-6 0.00 75.00 0 ND 1.3 14.22 196801 29 26 Toluene 108-85-3 91.00 1.3 27 trans-1,3-dichloropropene 10061-02-8 0.00 75.00 0 ND 1.3 0 ND 28 1,1,2-Trichlorosthane 79-00-5 0.00 97.00 1.3 Tetrachioroethene 0 ND 1.3 29 127-18-4 00.0 164.00 30 1.2-Dibromoethane 108-93-4 0.00 107.00 0 ND 1.3 Chlorobenzene 0.00 0 ND 1.3 31 108-90-7 112.00 32 Ethyl benzene 100-41-4 16.71 \$1.00 38477 ND 1.3 33 m.p-Xylene 1330-20-7 15.91 91.00 87588 ND 1.3 ND 34 o-Xylene 95-47-8 17.44 91.00 36381 1.3 35 ND Styrenei 100-42-5 0.00 104.00 0 1.3 1.1.2.2-Tetrachloroethane 17.56 14188 ND 1.3 35 79-34-5 83.00 37 Bromcfüorobenzene (SS) 17.99 95,00 714011 48.4 97% 244252 38 1,3,5-Trimethytherizene 19.29 105.00 3.3 1.3 108-67-8 1.2.4-Trimethylbenzene 45701 ND 1.3 30 85-63-8 19.84 105.00 40 1,3-Dichlorobergene 0.00 ND 1.3 541-73-1 146.00 0 41 Benzyl chloride 100-44-7 19.82 91.00 13157 ND 1.3 1.4-Dichlorobenzene 42 0.00 0 NO 1.3 105-48-7 148.00 1.2-Dictrombenzene 0.00 1.3 43 95-50-1 148.00 0 ND 44 1.2.4-Trichlorobenzene 0.00 ND 1.3 120-82-1 180.00 0

Calibration Data:

45

Hexachlbrobutadiene

0.00 NIST Traceable Standard Cylinder: Spectra Gases L59236, 1ppmv

615\_10N.D Date Printed:

815\_20F.D 8/10/00 9:53 AM

87-68-3

615\_30F.D Report: TO-15RPT3\_XLS

0

ND

1.3

ND = Not Detected at the Reporting Limits.

SS = Surrogale Standard: IS = Internal Standard 50 ng each

225.00

Col;SPS-1 Fused Silics; Nutech; -5C Tenex/Anazoro Trap; Ovent -50 for 2m to 150 @ 8/m

<sup>&</sup>quot;Note that 1,3-butadiene end MTBE are TO-15 compounds only and not TO-14 targets."

# 8100 Brownleigh Drive, Suite 120 Raieigh, North Carolina 27817 (new zipcode) Phone: 819-510-0228 Fax: 919-510-0141

Web Site: www.rtp-labs.com

-150 17025 Compliant for Testing Labs

Chain of Custody Record



Ø

CHANGE SEVEN SON ENVIRONMENTAL	Pro B	oject Manager	Phone !			96	78	Fair O'7	Number	LOU - RP	87-66 8-3-	00
Addison SI EAMES ST.			Requested Analyses						Pageoff			
CONTRACTIPUTCHEE OTHER NO.: Project Name:				Containers	75.05	rate					RTP Labs Proj. Tracking 195645	No.:
Sample ID No. and Description Date		Mairix Air, Lig. Solid	Preservatives	# of Corn	10-15 1600	2 7 8					Comments	Fraction #
# 12301 S.W. CORMER 8-2	1745	_Air_	Marc	-	<u> </u>					_		
# 0183 S.E. SiDE V		1										
# 93242 (MPHIND) 8-2	1745	AIR	ime	-								
	1											
							<u> </u>					
		1				<u> </u>						
Tuin Alound Time Requested for Report: Business Days:  1 day (44) 2 days (24) 3 days (24) 5 days (1	*Rush Mullip .5x) []10 day	llers (XX) (3*(1.1x) [] 15 d	AYB	De Eli	la Paci Istroni	: 8ld : Della	] Full etable		.1x surch	ar) (	Possible Hazardal Known Concer BACK ROUHO AIR	nitalions:
Relinquished By and C. Lena	Dalé:	***			gelvad H				LA			inse:
Relinquished By:  File: chain RTP. doc/ala ravision 0//2000	# Ba	2508 Y	##31°	R	eelved	—	Del	7	En	gle		bng: //-30/20



### ENVIRONMENTAL TESTING

\*EPA/NVLAP 101262-0

AIHA ACCREDITATION NO. 100439

• NY DOH 10903 • PA DER 06-353 • NJ DEP 77678

## **ANALYTICAL REPORT**

Client:

Report to:

Sevenson Environmental Services, Inc.

Project:

195805

Received:

09-AUG-00

Mark Nicklas Reports

Reported:

17-AUG-00

Sevenson Environmental Services, Inc. 2749 Lockport Road

P.O. Box 396

Niagara Falls NY 14304

f

Project Description:

Olin Remediation: TO-15 & Lib. Search

Summas

RESULT

UNITS

**METHOD** 

DATE

<u>ANALYST</u>

### 12474 North Side Area A

Lab Sample: 1414842 sampled: 07-AUG-00 16:00

### See Attached Report

Ethanol

9.0 ppbv

Acetone

7.0 ppbv

1,3-Pentadiene

9.0 ppbv

Carbon Disulfide

10.0 ppbv

### 809 North Side Area B

Lab Sample: 1414843

sampled: 07-AUG-00 16:00

### See Attached Report

Ethanol

9.0 ppbv

Carbon Disulfide

10.0 ppbv 7.0 ppbv

Octane 1-Methyl-4

1-methylethyl) Benzene 7.0 ppbv

3-Carene

8.0 poby



AIHA ACCREDITATION NO. 100439

### **ENVIRONMENTAL TESTING**

• EPA/NVLAP 101262-0

• NY DOH 10903 • PA DER 06-353 • NJ DEP 77678

Client:

Sevenson Environmental Services, Inc.

Project:

195805

RESULT

UNITS

**METHOD** 

DATE

**ANALYST** 

93294 Pad Area

Lab Sample: 1414844

sampled: 07-AUG-00 16:00

See Attached Report

Ethanol

7.0 ppbv

Acetone

9.0 ppbv

12630 Upwind

Lab Sample: 1414845

sampled: 07-AUG-00 16:00

See Attached Report

Alpha-methystyene

20.0 ppbv

12656 North Side Area A

Lab Sample: 1414846

sampled: 08-AUG-00 17:30

See Affached Report

2.4-dimethyl-

3-pentanone

8.0 ppbv

3-Heptanone

11.0 ppbv

**Butanoic Acid** 

propyl ester

15.0 ppbv

Pentanoic Acid

propyl ester

8.0 ppbv

Butanioc acid

butyl ester

17.0 ppbv

Hexanoic acid

ethyl ester

38.0 ppbv

Hexanoic acid

propyl ester

11.0 ppbv

Camphor

19.0 ppbv

9304 North Side Area B

Lab Sample: 1414847

sampled: 08-AUG-00 17:30

See Attached Report

Acetone

24.0 ppbv

Nitromethane

7.0 ppbv



### ENVIRONMENTAL TESTING

• EPA/NVLAP 101262-0

AIHA ACCREDITATION NO. 100439

• NY DOH 10903 • PA DER 06-353 • NJ DEP 77678

Client:

Sevenson Environmental Services, Inc.

Project:

195805

RESULT

UNITS

METHOD

DATE

**ANALYST** 

9102B Pad Area

Lab Sample: 1414848

sampled: 08-AUG-00 17:30

See Attached Report

Ethanol

9.0 ppbv

s-dichloroethyl ether 7.0 ppbv

Methyl Isuutyl Ketone 8.0 ppbv

Butanoic acid

(ethyl ester

59.0 ppbv

Butanoic acid

(propyl ester

70.0 ppbv

Pentanoic acid

(ethyl ester)

27.0 ppbv

Butanoic acid

(1-methylexyl ester

38.0 ppby

Butanoic acid

(1-methylpropyl ester 7.0 ppbv

2,6-Dimethyl-4-heptanone

. ...

10.0 ppbv Butanoic acid butyl ester

55.0 ppbv

Hexanoic acid ethyl ester . ...

30.0 ppbv

Monanal

10.0 ppbv



### **ENVIRONMENTAL TESTING**

- EPA/NVLAP 101262-0

- AIHA ACCREDITATION NO. 100439

• NY DOH 10903 • PA DER 06-353 • NJ DEP 77678

Client:

Sevenson Environmental Services, Inc.

Project:

195805

RESULT

UNITS

**METHOD** 

DATE

ANALYST

9334B Upwind

Lab Sample: 1414849

sampled: 08-AUG-00 17:30

See Attached Report

2,4-dimethyl-3-pentanone

Acetone

132.0 ppbv

Camphor

45.0 ppbv

Methyl Isobutyl Ketone 46.0 ppbv

Butanoic acid

344.0 ppbv

43.0 ppbv

Acetic acid

butyl ester

name a hima

ACCLIC GOIG

butyl ester

43.0 ppbv

Butanoic acid

proply ester

296.0 ppbv

Pentanoic acid

ethyl ester

167.0 ppbv

Pentanoic acid

butyl ester

39.0 ppbv

Butanoic acid

2-methylproply ester

112.0 ppbv

Propanoic acid

52.0 ppbv

Butanoic acid

218.0 ppbv

Pentanoic acid

71.0 ppbv

Hexanoic acid

321.0 ppbv

<sup>&</sup>lt; Indicates less than the limit of quantitation.

TO-14A/TO15 GC/MS Volatiles Report

Sample: Philip/Sevenson North Side "A" 8/7/00 Autosampler: 4 Dil. Fact: 2.6 1414842 nation off; 500ml; can 12474 Misc: 5970MSD1 C:\HPCHEM\1\8400\ 19800\_1.D Reporting Method: 8400IS File: Limits IS/Surr. Cmpd# Compound CAS# R.T. Qion Area ppbv ppbv Recovery 16.09 117.00 1194722 50.0 100% Chlorobenzene-d5 (IS) 1 75-71-8 2.22 85.00 10868 ND 1.3 2 Dichlorodifluoromethane (12) Chloromethane 74-87-3 0.00 52.00 0 ND 1.3 3 4 1,2- CF 1,1,2,2-F ethane (114) 76-14-2 0.00 85.00 0 ND 1.3 0 ND 5 Vinyl chloride 75-01-4 0.00 62.00 1.3 0.00 0 6 1.3-Butadiene 106-99-0 54.00 ND 1.3 0.00 0 ND 7 Bromomethane 74-83-9 94.00 1.3 0.00 0 ND Chioroethane 75-00-3 64.00 1.3 8 Trichlorofluoromethane (11) 75-69-4 0.00 101.00 0 ND 1.3 9 0.00 0 1,1-Dichloroethene 75-35-4 61.00 ND 1.3 10 11 1,1,2- Cl 1,2,2- F ethane (113) 76-13-1 0.00 151.00 0 ND 1.3 0 Methylene Chloride 75-09-2 0.00 84.00 ND 1.3 12 13 1,1-dichloroethane 75-34-3 0.00 63.00 0 ND 1.3 14 Methyl t-butyl ether (MTBE) 1634-04-4 0.00 73.00 0 ND 1.3 cis-1,2-Dichloroethene 156-59-2 0.00 61.00 0 ND 1.3 15 Bromochloromethane (SS) 9.76 130.00 278072 44.6 89% 16 17 Chloroform 67-66-3 0.00 83.00 0 ND 1.3 1,1,1-Trichloroethane 0.00 0 1.3 18 71-55-6 97.00 ND 19 1.2-Dichloroethane 107-06-2 0.00 0 ND 1.3 62.00 20 Carbon tetrachloride 56-23-5 0.00 117.00 0 ND 1.3 21 Benzene 71-43-2 11.09 16801 ND 1.3 78.00 1,4-Diffuorobenzene (SS) 1288950 42.8 22 11.81 114.00 86% Trichloroethene 0.00 23 79-01-6 130.00 0 ND 1.3 24 1,2-dichloropropane 0.00 0 78-87-5 63.00 ND 1.3 cis-1,3-dichloropropene 25 542-75-6 0.00 75.00 0 ND 1.3 26 Toluene 14.26 70551 108-88-3 91.00 ND 1.3 trans-1,3-dichloropropene 27 10061-02-6 0.00 75.00 0 ND 1.3 28 1,1,2-Trichloroethane 0.00 79-00-5 97.00 0 ND 1.3 29 Tetrachioroethene 0.00 127-18-4 164,00 0 ND 1.3 30 1.2-Dibromoethane 0.00 106-93-4 107.00 0 ND 1.3 31 Chlorobenzene 108-90-7 0.00 112.00 ND 1.3 0 Ethyl benzene 32 100-41-4 16.70 91.00 13381 ND 1.3 33 m.p-Xylene 1330-20-7 16.93 91.00 31448 ND 1.3 34 o-Xylene 95-47-6 17.44 91.00 12349 ND 1.3 35 Styrene 100-42-5 17.35 104.00 19670 ND 1.3 36 1,1,2,2-Tetrachloroethane 79-34-5 00.88 ND 0.00 1.3 0 37 Bromofluorobenzene (SS) 95.00 17.99 608124 46.7 93% 38 1,3,5-Trimethylbenzene 19.13 105.00 108-67-8 14997 ND 1.3 39 1,2,4-Trimethylbenzene 95-63-6 19.85 105.00 13343 ND 1.3 40 1.3-Dichlorobenzene 541-73-1 0.00 146.00 ND 1.3 0 41 Benzyl chloride 100-44-7 91.00 63084 2.1 20.48 1.3 42 1,4-Dichlorobenzene 106-46-7 0.00 146.00 ND 1.3 0 43 1,2-Dichlorobenzene 0.00 95-50-1 146.00 0 ND 1.3 44 1.2.4-Trichlorobenzene 120-82-1 0.00 180.00 ND 1.3 0 45 Hexachlorobutadiene 1.3 87-68-3 0.00 225.00 ND 0 NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv Calibration Data: 615\_10N.D 615\_20F.D 615\_30F.D Date Printed: 8/10/00 10:31 AM Report: TO-15RPT3.XLS

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; Nutech: -5C Tenax/Anosorb Trap; Oven: -50 for 2m to 150 @ 8/m

<sup>\*\*</sup>Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets.\*\*

TO-14A/TO15 GC/MS Volatiles Report

Sample: Misc:	Philip/Sevenson North Side *B nation off; 500ml; can 809	* 8/7/00		A	utosampler: 5  4 4843		Dil. Fact: 2.5 5970MSD1		
	8400IS	File: C:\HF	CHEM\1\8	400\	19800_2.D		Reporting	221 OMSD I	
meurod.	040010	rite. O.u ii	Ot Image of	TOO1	19000_2.0	,	Limits	IS/Surr	
Cmpd #	Compound	CAS#	R.T.	Q lon	Area	ppbv	ppbv	Recover	
1	Chlorobenzene-d5 (IS)		16.09	117.00	1291628	50.0		100%	
2	Dichlorodifluoromethane (12)	75-71-8	2.20	85.00	14852	ND	1.3	10070	
3	Chloromethane	74-87-3	0.00	52.00	0	ND	1.3		
4	1,2- Cl- 1,1,2,2-F ethane (114)	76-14-2	0.00	85.00	0	ND	1.3		
5	Vinyi chloride	75-01-4	0.00	62.00	Ö	ND	1.3		
6	1,3-Butadiene	106-99-0	0.00	54.00	0	ND	1.3		
7	Bromomethane	74-83-9	0.00	94.00	0	ND	1.3		
8	Chloroethane	75-00-3	0.00	64.00	0	ND	1.3		
9	Trichlorofluoromethane (11)	75-69-4	. 0.00	101.00	0	ND ND	1.3	•	
	1,1-Dichloroethene	, 75-35-4	0.00	61.00	0	ND	1.3 1.3		
10	1,1,2- Ci 1,2,2- F ethane (113)	76-13-1	0:00	151.00	0	ND	1.3 1.3		
11	Methylene Chloride	75-09-2	7.48	84.00	-31763	1.7	1.3 1.3		
12	·	75-34-3	0.00	63.00		ND			
13	1,1-dichloroethane				0		1.3		
14	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00	0	ND	1.3		
15	cis-1,2-Dichloroethene	156-59-2	0.00	61.00	0	ND	1.3		
16	Bromochloromethane (SS)		9.76	130.00	334257	49.6		99%	
17	Chioroform	67-66-3	0.00	83.00	0	ND	1.3		
18	1,1,1-Trichloroethane	71-55-6	0.00	97.00	0	ND	1.3		
19	1,2-Dichioroethane	107-06-2	0.00	62.00	0	ND	1.3		
20	Carbon tetrachloride	56-23-5	0.00	117.00	0	ND	1.3		
21	Benzene	71-43-2	11.25	78.00	74381	1.3	1.3		
22	1,4-Difluorobenzene (SS)		11.81	114.00	1404590	43.1		86%	
23	Trichloroethene	79-01-6	0.00	130.00	0	ND	1.3		
24	1,2-dichloropropane	78-87-5	0.00	63.00	0	ND	1.3		
25	cis-1,3-dichloropropene	542-75-6	0.00	75.00	0	ND	1.3		
26	Toluene	108-88-3	14.22	91.00	253851	3.7	1.3		
27	trans-1,3-dichloropropene	10061-02-6	0.00	75.00	o	ND	1.3		
28	1,1,2-Trichloroethane	79-00-5	0.00	97.00	0	ND	1.3		
29	Tetrachloroethene	127-18-4	0.00	164.00	0	ND	1.3		
30	1,2-Dibromoethane	106-93-4	0.00	107.00	Ō	ND	1.3		
	Chlorobenzene	108-90-7	0.00	112.00	0	ND	1.3		
	Ethyl benzene	100-41-4	16.71	91.00	49105	ND	1.3		
	m,p-Xylene	1330-20-7	16.91	91.00	135476	ND	1.3		
	o-Xylene	95-47-6	17.44	91.00	53332	ND	1.3		
	Styrene	100-42-5	0.00	104.00	0	ND	1.3	*	
	1,1,2,2-Tetrachloroethane	79-34-5	17.08	83.00	12962	ND	1.3		
		, 0-04-0					1.3	0.40/	
	Bromofluorobenzene (SS)	400 67 0	17.99	95.00	659132	46.8	4.0	94%	
	1,3,5-Trimethylbenzene	108-67-8	19.14	105.00	27465	ND	1.3		
	1,2,4-Trimethylbenzene	95-63-6	19.84	105.00	24790	ND	1.3		
	1,3-Dichlorobenzene	541-73-1	0.00	146.00	0	ND	1.3		
	Benzyl chloride	100-44-7	20.49	91.00	135887	4.0	1.3		
	1,4-Dichlorobenzene	106-46-7	0.00	146.00	0	ND	1.3		
	1,2-Dichlorobenzene	95-50-1	0.00	146.00	0	ND	1.3		
	1,2,4-Trichlorobenzene	120-82-1	0.00	180.00	0	ND	1.3		
	lexachlorobutadiene	87-68-3	0.00	225.00	0	ND	1.3		
(		aceable Standard	f Cylinder:	Spectra G	ases L69236,	1ppmv	•		
	615_10N.D	615_20F.D				_30F.D			
	Date Printed: 8/10/	00 10:30 AM	Report: To	O-15RPT3	XLS				

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

TO-14A/TO15 GC/MS Volatiles Report

Autosampler: 6 Sample: Philip/Sevenson Pad Area 8/7/00 Dil. Fact: 2.4 1414844 nafion off; 500ml; can 93294 Misc: 5970MSD1 C:\HPCHEM\1\8400\ Method: 8400IS 19800\_3.D File: Reporting Limits IS/Surr. CAS# R.T. ppbv Cmpd # Compound Q lon Area ppbv Recovery 16.09 Chlorobenzene-d5 (IS) 117.00 1368991 50.0 100% 2.22 75-71-8 ND 1.2 2 Dichlorodifluoromethane (12) 85.00 15676 0.00 ND 52.00 1.2 3 Chloromethane 74-87-3 0 0.00 0 ND 1.2 1,2- Cl- 1,1,2,2-F ethane (114) 76-14-2 85.00 4 75-01-4 0.00 62.00 0 ND 1.2 5 Vinyl chloride 0.00 0 ND 106-99-0 54.00 1.2 6 1,3-Butadiene 7 Bromomethane 74-83-9 0.00 94.00 0 ND 1.2 75-00-3 0.00 64.00 0 ND 1.2 8 Chloroethane 0.00 0 ND 1.2 9 Trichlorofluoromethane (11) 75-69-4 101.00 0.00 0 ND 1.2 1.1-Dichloroethene 75-35-4 10 61.00 0.00 0 1.2 1,1,2- Cl 1,2,2- F ethane (113) 151.00 ND 11 76-13-1 12 Methylene Chloride 75-09-2 0.00 84.00 0 ND 1.2 0.00 13 1,1-dichloroethane 75-34-3 63.00 0 ND 1.2 14 Methyl t-butyl ether (MTBE) 1634-04-4 0.00 73.00 0 ND 1.2 0.00 0 1.2 15 cis-1,2-Dichloroethene 156-59-2 61,00 ND 16 9.76 Bromochloromethane (SS) 130.00 337558 47.3 95% 0.00 17 Chioroform 67-66-3 83.00 0 ND 1.2 1,1,1-Trichloroethane 71-55-6 0.00 0 18 97.00 ND 1.2 19 1,2-Dichloroethane 107-06-2 0.00 62.00 0 ND 1.2 20 Carbon tetrachloride 0.00 0 56-23-5 117.00 ND 1.2 21 Benzene 71-43-2 11.13 78.00 12688 ND 1.2 22 1,4-Difluorobenzene (SS) 11.81 114.00 1530465 44.3 89% Trichloroethene 23 79-01-6 0.00 130.00 0 ND 1.2 24 1.2-dichloropropane 78-87-5 0.00 63.00 ٥ ND 1.2 25 cis-1,3-dichloropropene 542-75-6 0.00 75.00 0 ND 1.2 26 Toluene 14.24 91.00 78279 108-88-3 ND 1.2 27 trans-1,3-dichloropropene 10061-02-6 0.00 75.00 0 ND 1.2 28 1.1.2-Trichloroethane 79-00-5 0.00 97.00 0 ND 1.2 29 Tetrachloroethene 0.00 164.00 0 127-18-4 ND 1.2 30 1.2-Dibromoethane 106-93-4 0.00 107.00 0 ND 1.2 31 Chlorobenzene 0.00 108-90-7 112.00 ٥ ND 1.2 32 Ethyl benzene 100-41-4 16.72 91.00 13194 ND 1.2 33 m,p-Xylene 1330-20-7 16.93 91.00 28000 ND 1.2 34 o-Xylene 95-47-6 17.46 91.00 11690 ND 1.2 35 Styrene 100-42-5 0.00 104.00 ND 1.2 0 36 1,1,2,2-Tetrachloroethane 79-34-5 0.00 83.00 ٥ ND 1.2 37 Bromofluorobenzene (SS) 17.99 95.00 678960 45.5 91% 38 1,3,5-Trimethylbenzene 108-67-8 19.13 105.00 ND 11711 1.2 39 1,2,4-Trimethylbenzene 95-63-6 19.85 105.00 12782 ND 1.2 40 1.3-Dichlorobenzene 541-73-1 146.00 0.00 0 ND 1.2 41-Benzyl chloride 100-44-7 20.48 91.00 55112 1.5 1.2 42 1,4-Dichiorobenzene 106-46-7 0.00 146.00 0 ND 1.2 43 1,2-Dichiorobenzene 95-50-1 0.00 146.00 0 1.2 ND 44 1.2.4-Trichlorobenzene 120-82-1 0.00 180.00 0 ND 1.2 45 Hexachlorobutadiene 87-68-3 0.00 225.00 ND 1.2 Calibration Data: NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv 615\_10N.D 615\_20F.D 615\_30F.D Date Printed: 8/10/00 10:30 AM Report: TO-15RPT3\_XLS

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; Nutech: -5C Tenax/Anasorb Trap; Oven: -50 for 2m to 150 @ 8/m

Autosampler: Z 1414845 Dil. Fact: 2.6 Sample: Philip/Sevenson Upwind 8/7/00 nation off; 500ml; can 12630 5970MSD1 Misc: Reporting Method: 8400IS File: C:\HPCHEM\1\8400\ 19800\_4.D iS/Surr. Limits Recovery CAS# R.T. Q ion Area ppbv ppbv Compound Cmpd # 16.09 117,00 1328130 50.0 100% Chlorobenzene-d5 (IS) 75-71-8 2.20 13796 ND 1.3 2 Dichlorodifluoromethane (12) 85.00 0.00 0 ND 1.3 3 Chloromethane 74-87-3 52.00 0.00 0 ND 1.3 4 1,2- Ci- 1,1,2,2-F ethane (114) 76-14-2 85.00 ND 5 Vinyl chloride 75-01-4 0.00 62.00 0 1.3 6 1.3-Butadiene 106-99-0 0.00 54.00 0 ND 1.3 0.00 0 ND 74-83-9 94.00 1.3 7 Bromomethane 75-00-3 0.00 0 ND 8 Chloroethane 64.00 1.3 0.00 9 Trichlorofluoromethane (11) 75-69-4 101.00 0 ND 1.3 10 1.1-Dichloroethene 75-35-4 0.00 61.00 0 ND 1.3 1,1,2- Cl 1,2,2- F ethane (113) 76-13-1 0.00 151.00 0 ND 1.3 11 75-09-2 0.00 0 ND 1.3 12 Methylene Chloride 84.00 13 1,1-dichloroethane 75-34-3 0.00 63.00 0 ND 1.3 Methyl t-butyl ether (MTBE) 1634-04-4 0.00 0 ND 1.3 14 73.00 0.00 ND 15 cis-1,2-Dichloroethene 156-59-2 61.00 0 1.3 16 Bromochloromethane (SS) 9.76 130.00 338201 48.8 98% 17 Chloroform 0.00 ND 1.3 67-66-3 83.00 ٥ 1,1,1-Trichloroethane 18 71-55-6 0.00 97.00 0 ND 1.3 19 1,2-Dichloroethane 107-06-2 0.00 0 ND 62.00 1.3 20 Carbon tetrachloride 56-23-5 0.00 117.00 0 ND 1.3 21 Benzene 71-43-2 11.13 78.00 ND 1.3 11889 22 1.4-Difluorobenzene (SS) 11.81 114.00 1488512 44.4 89% 23 Trichloroethene 0.00 ND 79-01-6 130.00 0 1.3 24 1,2-dichloropropane 78-87-5 0.00 63.00 0 ND 1.3 25 cis-1,3-dichloropropene 542-75-6 0.00 75.00 0 ND 1.3 26 14.26 Toluene 108-88-3 91.00 57764 ND 1.3 27 trans-1,3-dichloropropene 10061-02-6 0.00 75.00 0 ND 1.3 28 1,1,2-Trichloroethane 79-00-5 0.00 97.00 0 ND 1.3 29 Tetrachloroethene 0.00 0 ND 127-18-4 164.00 1.3 30 1.2-Dibromoethane 106-93-4 0.00 107.00 ND 1.3 0 31 Chlorobenzene 108-90-7 0.00 112.00 ٥ ND 1.3 32 Ethyl benzene 100-41-4 16.92 91.00 20741 ND 1.3 33 m.p-Xylene 1330-20-7 16.92 91.00 20741 ND 1.3 34 o-Xylene 95-47-6 0.00 91.00 0 ND 1.3 35 Styrene 100-42-5 0.00 104.00 0 ND 1.3 36 1,1,2,2-Tetrachloroethane 79-34-5 0.00 83.00 ٥ ND 1.3 37 Bromofluorobenzene (SS) 17.98 95.00 668272 46.1 92% 38 1,3,5-Trimethylbenzene 19.13 108-67-8 105.00 10295 ND 1.3 39 1.2.4-Trimethylbenzene 95-63-6 0.00 105.00 0 ND 1.3 40 1,3-Dichlorobenzene 541-73-1 0.00 146.00 ٥ ND 1.3 41 Benzyl chloride 19.51 100-44-7 91.00 33449 ND 1.3 42 1,4-Dichlorobenzene 106-46-7 0.00 146.00 0 ND 1.3 43 1,2-Dichlorobenzene 0.00 95-50-1 146.00 0 1.3 ND 44 1.2.4-Trichlorobenzene 120-82-1 0.00 180.00 0 1.3 ND 45 Hexachiorobutadiene 87-68-3 0.00 225.00 1.3 0 ND Calibration Data: NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv 615\_10N.D 615\_20F.D 615\_30F.D Date Printed: 8/10/00 10:29 AM Report: TO-15RPT3.XLS

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; iS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; Nutech: -5C Tenax/Anasorb Trap; Oven: -50 for 2m to 150 @ 8/m

<sup>&</sup>quot;Note that 1.3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Sample:	Philip/Sevenson North Side "A	<b>8/8/00</b>		A	utosampler: 8		Dil. Fact:	2.6
Misc:	nation off; 500ml; can 12256				1414846	• •		5970MSD1
	: 8400IS	File: C:VHF	CHEM\1\8	400\	19800_5.D		Reporting	
					1	4	Limits	IS/Surr.
Cmpd #	Compound	CAS#	R.T.	Qlon	Area	ppbv	ppbv	Recovery
1	Chiorobenzene-d5 (IS)		16.11	117.00	1414188	50.0		100%
2	Dichlorodifluoromethane (12)	75-71-8	2.20	85.00	15793	ND	1.3	
3	Chloromethane	7 <del>4</del> -87-3	0.00	52.00	0	ND	1.3	
4	1,2- CI- 1,1,2,2-F ethane (114)	•	0.00	85.00	0	ND	1.3	
5	Vinyl chloride	75-01-4	0.00	62.00	0	ND	1.3	
6	1,3-Butadiene	<b>106-9</b> 9-0	0.00	54.00	0	ND	1.3	•
7	Bromomethane	74-83-9	0.00	94.00	0	ND	1.3	
8	Chloroethane	75-00-3	0.00	64.00	0	ND	1.3	
9	Trichlorofluoromethane (11)	75-69-4	0.00	101.00	0	ND	1.3	
10	1,1-Dichloroethene	75-35-4	0.00	61.00	0	ND	1.3	
11	1,1,2- Cl 1,2,2- F ethane (113)	76-13-1	0.00	151.00	0	ND	1.3	
12	Methylene Chloride	75 <del>-</del> 09-2	0.00	84.00	÷ 0	ND	1.3	
13	1,1-dichloroethane	75-34-3	0.00	63.00	0	ND	1.3	
14	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00	0	ND	1.3	
15	cis-1,2-Dichloroethene	156-59-2	0.00	61.00	0	ND	1.3	
16	Bromochloromethane (SS)		9.76	130.00	361438	49.0		98%
17	Chloroform	67-66-3	0.00	83.00	0	ND	1.3	
18	1,1,1-Trichloroethane	71-55-6	0.00	97.00	Ö	ND	1.3	
19	1,2-Dichloroethane	107-06-2	0.00	62.00	ō	ND	1.3	
20	Carbon tetrachloride	56-23-5	0.00	117.00	0	ND	1.3	
21	Benzene	71-43-2	11.26	78.00	34912	ND	1.3	
22	1,4-Difluorobenzene (SS)	, ,	11.83	114.00	1376499	38.6		77%
23	Trichloroethene	79-01-6	0.00	130.00	0	ND	1.3	1770
24		78-87-5	0.00	63.00	Ö	ND	1.3	
25	cis-1,3-dichloropropene	542-75-6	0.00	75.00	o	ND	1.3	
26	Toluene	108-88-3	14.26	91.00	58675	ND	1.3	
27	trans-1,3-dichloropropene	10061-02-6	0.00	75.00	0	ND	1.3	
28	1,1,2-Trichloroethane	79-00-5	0.00	97.00	o	ND	1.3	
29	Tetrachioroethene	127-18-4	0.00	164.00	. 0	ND	1.3	
	1,2-Dibromoethane	106-93-4	0.00	107.00	o	ND	1.3	
	Chlorobenzene	108-90-7	0.00	112.00	0	ND	1.3	
32	Ethyl benzene	100-50-7	16.72	91.00	41571	ND	1.3	
	m,p-Xylene	1330-20-7	16.93	91.00	58219	ND	1.3	
	o-Xylene	85-47-6	17.46	91.00	24865	ND	1.3	
	Styrene	100-42-5	0.00	104.00	24000 0	ND	1.3	
	1,1,2,2-Tetrachloroethane	79-34-5	0.00					
	Bromofluorobenzene (SS)	/ <del>3-34-</del> 5		83.00	720500	ND	1.3	000/
		400.07.0	17.99	95.00 105.00	720508	46.7	4.0	83%
	1,3,5-Trimethylbenzene	108-67-8	19.13	105.00	21715	ND	1.3	
	1,2,4-Trimethylbenzene	95-63-6 544-73-4	19.85	105.00	27701	ND	1.3	
	1,3-Dichlorobenzene	541-73-1	0.00	146.00	0	ND	1.3	•
	Benzyl chloride	100-44-7	20.50	91.00	39842	ND	1.3	
	1,4-Dichlorobenzene	106-46-7	0.00	146.00	0	ND	1.3	
	1,2-Dichlorobenzene	95-50-1	0.00	146.00	0	ND	1.3	
	1,2,4-Trichlorobenzene	120-82-1	0.00	180.00	0	ND	1.3	
	Hexachlorobutadiene	87-68-3	0.00	225.00	0	ND	1.3	
		raceable Standard	z Cylinder.	opectra G	•			
	615_10N.D	615_20F.D		<b></b>	<del></del>	30F.D		
	Date Printed: 8/10/	00 10:28 AM	Report: T	O-15RPT:	3XLS			

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Dil. Fact: 2.6

TO-14A/TO15 GC/MS Volatiles Report

Sample: Philip/Sevenson North Side "B" 8/8/00 Autosampler: 9 1414847 nation off; 500ml; can A304 Misc: 5970MSD1 Method: 8400IS File: C:\HPCHEM\1\8400\ 19800\_6.D Reporting Limits IS/Surr. Compound CAS# R.T. Cmpd # Q ion Area ppbv ppbv Recovery 1 Chlorobenzene-d5 (IS) 16.09 117.00 1347037 50.0 100% Dichlorodifluoromethane (12) 75-71-8 2 2.22 85.00 13405 ND 1.3 3 Chloromethane 74-87-3 0.00 52.00 0 ND 1.3 1,2- Cl- 1,1,2,2-F ethane (114) 4 76-14-2 0.00 85.00 0 ND 1.3 5 Vinyl chloride 75-01-4 0.00 62.00 0 ND 1.3 6 1,3-Butadiene 106-99-0 0.00 0 54.00 ND 1.3 7 Bromomethane 74-83-9 0.00 0 94.00 ND 1.3 8 Chloroethane 75-00-3 0.00 0 64.00 ND 1.3 Trichlorofluoromethane (11) 9 75-69-4 0.00 101.00 0 ND 1.3 1,1-Dichloroethene 10 75-35-4 0.00 61.00 0 ND 1.3 1,1,2- Cl 1,2,2- F ethane (113) 11 76-13-1 0.00 151.00 0 ND 1.3 12 Methylene Chloride 75-09-2 0.00 84.00 0 ND 1.3 13 1,1-dichloroethane 75-34-3 0.00 0 63.00 ND 1.3 14 Methyl t-butyl ether (MTBE) 1634-04-4 0.00 73.00 0 ND 1.3 cis-1,2-Dichloroethene 15 156-59-2 0.00 61.00 0 ND 1.3 Bromochloromethane (SS) 16 9.76 130.00 333380 47.4 95% 17 Chloroform 67-66-3 0.00 83.00 0 ND 1.3 18 1,1,1-Trichioroethane 71-55-6 0.00 97.00 0 ND 1.3 19 1,2-Dichloroethane 107-06-2 0.00 62.00 0 ND 1.3 20 Carbon tetrachloride 56-23-5 0.00 117.00 0 ND 1.3 21 Benzene 71-43-2 11.26 78.00 35193 ND 1.3 22 1,4-Difluorobenzene (SS) 11.81 114.00 1509151 44.4 89% 23 Trichloroethene 79-01-6 0.00 130.00 ND 0 1.3 24 1,2-dichloropropane 78-87-5 0.00 63.00 0 ND 1.3 25 cis-1,3-dichloropropene 0.00 542-75-6 75.00 0 ND 1.3 26 Toluene 108-88-3 14.26 ND 91.00 40218 1.3 27 trans-1,3-dichloropropene 10061-02-6 0.00 75.00 0 ND 1.3 28 1,1,2-Trichloroethane 79-00-5 0.00 97.00 0 ND 1.3 29 Tetrachloroethene 127-18-4 0.00 164.00 0 ND 1.3 30 1.2-Dibromoethane 106-93-4 0.00 107.00 0 ND 1.3 31 Chlorobenzene 108-90-7 0.00 112.00 0 ND 1.3 32 Ethyl benzene 100-41-4 16.93 91.00 16621 ND 1.3 33 m,p-Хуlепе 1330-20-7 16.93 91.00 16621 ND 1.3 34 o-Xylene 95-47-6 0.00 91.00 0 ND 1.3 35 Styrene 100-42-5 0.00 104.00 0 ND 1.3 36 1,1,2,2-Tetrachioroethane 79-34-5 0.00 83.00 0 ND 1.3 37 Bromofluorobenzene (SS) 17.99 95.00 682807 46.5 93% 38 1,3,5-Trimethylbenzene 108-67-8 0.00 105.00 0 ND 1.3 39 1,2,4-Trimethylbenzene 95-63-6 0.00 105.00 0 ND 1.3 40 1,3-Dichlorobenzene 0.00 541-73-1 146.00 0 ND 1.3 41 Benzyl chloride 100-44-7 20.48 91.00 35089 1.3 ND 42 1,4-Dichlorobenzene 0.00 106-46-7 146.00 0 ND 1.3 43 1,2-Dichlorobenzene 95-50-1 0.00 146.00 1.3 0 ND 44 1,2,4-Trichiorobenzene 120-82-1 0.00 180.00 0 ND 1.3 45 Hexachloro butadiene 87-68-3 0.00 225.00 1.3 ND Calibration Data: NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv

615\_10N.D

615\_20F.D

615\_30F.D

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Date Printed: ND = Not Detected at the Reporting Limits.

8/10/00 10:20 AM Report: TO-15RPT3.XLS

SS = Surrogate Standard; IS = Internal Standard 50 ng each Col:SPB-1 Fused Silica; Nutech: -5C Tenax/Anasorb Trap; Oven: -50 for 2m to 150 @ 8/m

Sample: Philip/Sevenson Pad Area 8/8/00 Autosampier: 10 Dil. Fact: 1.8 1414848 nafion off; 500ml; can 9102B 5970MSD1 Misc: Method: 8400IS File: C:\HPCHEM\1\8400\ 19800\_7.D Reporting Limits IS/Surr. CAS# R.T. Compound Q ion ppbv ppbv Recovery Cmpd # Area Chlorobenzene-d5 (IS) 16.09 1405713 50.0 100% 117.00 1 75-71-8 2.22 20706 ND 0.9 Dichlorodifluoromethane (12) 85.00 2 Chloromethane 74-87-3 0.00 52.00 0 ND 0.9 3 76-14-2 0.00 0 ND 1,2- Cl- 1,1,2,2-F ethane (114) 0.9 85.00 4 5 Vinyl chloride 75-01-4 0.00 62.00 0 ND 0.9 1,3-Butadiene 106-99-0 0.00 54.00 0 ND 0.9 6 Bromomethane 74-83-9 0.00 94.00 7 ٥ ND 0.9 0.00 Chloroethane 75-00-3 64.00 8 ٥ ND 0.9 9 Trichlorofluoromethane (11) 75-69-4 6.17 101.00 10275 ND 0.9 1,1-Dichloroethene 75-35-4 0.00 61.00 ND 10 0 0.9 1,1,2- Cl 1,2,2- F ethane (113) 76-13-1 0.00 0 151.00 ND 0.9 11 12 Methylene Chioride 75-09-2 0.00 84.00 0 ND 0.9 13 1,1-dichloroethane 75-34-3 0.00 63.00 0 ND 0.9 14 Methyl t-butyl ether (MTBE) 1634-04-4 9.01 73.00 10402 ND 0.9 cis-1,2-Dichloroethene 156-59-2 0.00 15 0 ND 0.9 61.00 18 Bromochloromethane (SS) 9.76 49.1 130.00 359818 98% Chloroform 0.00 17 67-66-3 ND 0.9 83.00 0 18 1,1,1-Trichloroethane 71-55-6 0.00 0 ND 97.00 0.9 19 1,2-Dichloroethane 107-06-2 0.00 62.00 0 ND 0.9 20 Carbon tetrachloride 56-23-5 0.00 ND 117.00 0 0.9 71-43-2 21 Benzene 11.25 78.00 39642 ND 0.9 22 1,4-Difluorobenzene (SS) 11.81 114.00 1446791 40.8 82% 23 Trichloroethene 79-01-6 0.00 130.00 0 ND 0.9 24 1,2-dichloropropane 78-87-5 0.00 63.00 0 ND 0.9 25 cis-1,3-dichloropropene 542-75-6 0.00 75.00 ٥ ND 0.9 Toluene 26 108-88-3 14.23 91.00 98539 1.0 0.9 27 trans-1,3-dichloropropene 0.00 10061-02-6 0 75.00 ND 0.9 1,1,2-Trichloroethane 28 79-00-5 0.00 97.00 0 ND 0.9 29 Tetrachioroethene 0.00 127-18-4 164.00 0 0.9 ND 30 1,2-Dibromoethane 106-93-4 0.00 107.00 0 ND 0.9 Chlorobenzene 31 108-90-7 0.00 112.00 0 ND 0.9 32 Ethyl benzene 16.69 100-41-4 91.00 39755 ND 0.9 33 m,p-Xylene 1330-20-7 16.90 91.00 74422 ND 0.9 34 o-Xylene 17.44 28203 95-47-6 91.00 0.9 ND 35 Styrene 100-42-5 0.00 104.00 0 ND 0.9 36 1,1,2,2-Tetrachloroethane 79-34-5 0.00 83.00 0 ND 0.9 37 Bromofluorobenzene (SS) 17.97 95.00 718693 46.9 94% 1.3,5-Trimethylbenzene 38 108-67-8 19.29 105.00 10007 ND 0.9 39 1,2,4-Trimethylbenzene 95-63-6 19.84 105.00 27969 ND 0.9 40 1,3-Dichlorobenzene 541-73-1 0.00 146.00 0 ND 0.9 41 Benzyl chloride 100-44-7 20.47 91.00 38979 ND 0.9 42 1,4-Dichlorobenzene 0.00 106-46-7 146.00 0 ND 0.9 43 1,2-Dichlorobenzene 95-50-1 0.00 0.9 146.00 0 ND 44 1,2,4-Trichiorobenzene 120-82-1 0.00 180.00 0 ND 0.9 45 Hexachlorobutadiene 87-68-3 0.00 225.00 0.9 ND 0 NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv Calibration Data: 615\_10N.D 615\_20F.D 615\_30F.D Date Printed: 8/10/00 10:19 AM Report: TO-15RPT3\_XLS

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica: Nutech: -5C Tenax/Anasorb Trap; Oven: -50 for 2m to 150 @ 8/m

<sup>™</sup>Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets.™

Sample	: Philip/Sevenson Upwind 8/8/00	A/TO15 (		William Company of the Company of th	utosampler:	······································	Dil. Fact:	1.8
Misc:	nation off; 500ml; can 9334B				[414]			5970MSD1
	: 8400IS	File: C:\HP	CHEM\1\8	400\	19800_8.D	, , ,	Reporting	
11100100	. 6,000						Limits	IS/Surr
Cmpd a	¥ Compound	CAS#	R.T.	Q ion	Area	ppbv	ppbv	Recover
1	Chlorobenzene-d5 (IS)		16.09	Oliver to the second	1382381	50.0		100%
2	Dichlorodifluoromethane (12)	75-71-8	2.22		19617	ND	0.9	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
3	Chloromethane	74-87-3	0.00		0	ND	0.9	•
4	1,2- Cl- 1,1,2,2-F ethane (114)	76-14-2	0.00		0	ND	0.9	
5	Vinyi chloride	75-01-4	0.00		0	ND	0.9	
6	1,3-Butadiene	106-99-0	3.41	54.00	10288	2.4	0.9	
7	Bromomethane	74-83-9	0.00	94.00	0	ND	0.9	•
8	Chloroethane	75-00-3	0.00	64.00	0	ND	0.9	
9	Trichlorofluoromethane (11)	75-69-4	. 0.00	101.00	0	· ND	0.9	
10	1,1-Dichloroethene	, 75-35-4	0.00	61.00	0	ND	0.9	
11	1,1,2- Cl 1,2,2- F ethane (113)	<sup>*</sup> 76-13-1	0.00	151.00	0	ND	0.9	
12	Methylene Chloride	75-09-2	0.00	84.00	.a. <b>0</b>	ND	0.9	
13	1,1-dichioroethane	75-34-3	0.00	63.00	0	ND	0.9	
14	Methyl L butyl ether (MTBE)	1634-04-4	9.32	73.00	159493	7.3	0.9	
15	cis-1,2-Dichloroethene	156-59-2	0.00	61.00	0	ND	0.9	
16	Bromochloromethane (SS)		9.76	130.00	341361	47.3		95%
17	Chloroform	67-66-3	0.00	83.00	0	ND	0.9	
18	1,1,1-Trichloroethane	71-55-6	0.00	97.00	0	ND	0.9	
19	1,2-Dichloroethane	107-06-2	0.00	62.00	0	ND	0.9	
20	Carbon tetrachloride	56-23-5	0.00	117.00	0	ND	0.9	
21	Benzene	71-43-2	11.25	78.00	43072	ND	0.9	
22	1,4-Difluorobenzene (SS)		11.81	114.00	1483218	42.5		85%
23	Trichloroethene	79-01-6	0.00	130.00	0	ND	0.9	
24	1,2-dichloropropane	78-87-5	0.00	63.00	0	ND	0.9	
25	cis-1,3-dichloropropene	542-75-6	12.96	75.00	153503	2.7	0.9	
26	Toluene	108-88-3	14.19	91.00	380187	3.7	0.9	
27	trans-1.3-dichloropropene	10061-02-6	14.24	75.00	19963	ND	0.9	
28	1,1,2-Trichloroethane	79-00-5	0.00	97.00	0	ND	0.9	
29	Tetrachloroethene	127-18-4	0.00	164.00	0	ND	0.9	
30	1,2-Dibromoethane	106-93-4	0.00	107.00	0	ND	0.9	
31	Chlorobenzene	108-90-7	16.14	112.00	16743	ND	0.9	
32	Ethyl benzene	100-41-4	16.66	91.00	443799	3.1	0.9	
33	т,р-Хујепе	1330-20-7	16.88	91.00	599132	2.8	0.9	
34	o-Xylene	95-47-6	17.41	91.00	204574	1.8	0.9	
35	Styrene	100-42-5	17.33	104.00	45427	ND	0.9	
36	1,1,2,2-Tetrachioroethane	79-34-5	17.72	83.00	45263	ND	0.9	
37	Bromofluorobenzene (SS)		18.00	95.00	737981	49.0		98%
38	1,3,5-Trimethylbenzene	108-67-8	19.28	105.00	71294	ND	0.9	
39	1,2,4-Trimethylbenzene	95-63-6	19.83	105.00	208079	1.8	0.9	
40	1,3-Dichlorobenzene	541-73-1	20.04	146.00	28454	ND	0.9	
	Benzyl chloride	100 <del>-44-</del> 7	19.90	91.00	10679	ND	0.9	
	1,4-Dichlorobenzene	106-46-7	20.04	146.00	28454	ND	0.9	
	1,2-Dichlorobenzene	95-50-1	0.00	146.00	0	ND	0.9	
	1,2,4-Trichiorobenzene	120-82-1	0.00	180.00	O	ND	0.9	
	Hexachlorobutadiene Calibration Data: NIST Tr	87-68-3	0.00	225.00	0	ND	0.9	

ND = Not Detected at the Reporting Limits.

Date Printed:

615\_10N.D

Report: TO-15RPT3.XLS SS = Surrogate Standard; IS = Internal Standard 50 ng each

615\_30F.D

8/10/00 10:14 AM

615\_20F.D

8100 Brownleigh Drive, Suite 120 Raleigh, NC 27617



919 510-0228 Telephane

919 510-0141 Fax

Web Site: www.rtp-labs.com

#### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin

Estimated ppbv\*

Project No: 195645

Sample Date: 8/7/2000

Matrix: Air in Summa Canister

Analysis Date: 8/9/2000

Date Received: 8/9/2000

Sample ID: Compound

1414842 canister 12474 "North Side Area A 8/7/2000"

9 Ethanol 7 acetone 1,3-pentadiene 9 carbon disulfide 10

Estimated ppbv\*

Sample	ID:
Compou	$\mathbf{m}\mathbf{d}$

1414843 canister 809 "North Side Area B 8/7/2000"

Ethanol	9
carbon disulfide	10
Octane	7
1-methyl-4-(1-methylethyl) benzene	7
3-carene	8

<sup>\*</sup>Estimated values were calculated against the  $d_5$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

File: 195805.doc/als

<sup>\*</sup>Estimated values were calculated against the  $d_5$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

8100 Brownleigh Drive, Suite 120 Raleigh, NC 27617



919 510-0228 Telephone

919 510-0141 Fax

Web Site: www.rtp-labs.com

#### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin

Project No: 195805

Sample Date: 8/7/2000

Matrix: Air in Summa Canister

Analysis Date: 8/9/2000

Date Received: 8/9/2000

Sample ID: Compound 1414844 canister 93294 "Pad Area 8/7/2000"

Estimated ppbv\*

Ethanol

7

acetone

9

Sample ID:

1414845 canister 12630 "Upwind 8/7/2000"

Compound

Estimated ppbv\*

alpha-methylstyrene

20

Sample ID:

1414846 canister 12630 "Side A 8/8/2000"

Compound

Estimated ppbv\*

2,4-dimethyl-3-pentanone	8
3-heptanone	11
Butanoic acid, propyl ester	15
Pentanoic acid, propyl ester	8
Butanoic acid, butyl ester	17
Hexanoic acid, ethyl ester	38
Hexanoic acid, propyl ester	11.
Camphor	19

<sup>\*</sup>Estimated values were calculated against the  $d_5$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

File: 195805.doc/als

<sup>\*</sup>Estimated values were calculated against the  $d_5$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

<sup>\*</sup>Estimated values were calculated against the  $d_s$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

8100 Brownleigh Drive, Suite 120 Raleigh, NC 27617



919 510-0228 Telephone

Web Site: www.rtp-labs.com 919 510-0141 Fax

#### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin Project No: 195805

Sample Date: 8/8/2000

Matrix: Air in Summa Canister

Analysis Date: 8/9/2000

Date Received: 8/9/2000

Sample ID:

1414847 canister A304 "North Side Area B 8/8/2000"

Compound

Estimated ppbv\*

Acetone

24

Nitromethane

7

Sample ID:

1414848 canister 9102B"Pad Area 8/8/2000"

Compound	Estimated ppbv*							
Ethanol	9							
s-Dichloroethyl ether	7							
Methyl Isobutyl Ketone	8							
Butanoic acid, ethyl ester	59							
Butanoic acid, propyl ester	70							
Pentanoic acid, ethyl ester	27							
Butanoic acid, 1-methylhexyl ester	38							
Butanoic acid, 1-methylpropyl ester	7							
2,6-dimethyl-4-heptanone	10							
Butanoic acid, butyl ester	55							
Hexanoic acid, ethyl ester	30							
Nonanal	10							

<sup>\*</sup>Estimated values were calculated against the  $d_5$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

<sup>\*</sup>Estimated values were calculated against the  $d_5$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

Sample:	Philip/Sevenson North Side 1	B19/00	)			Autozampie	r: 4	Dii. Faci	1.7
Alas:	nation off; 500jnl; can 93017	*							517,053
	E+001S	File:	C:VI	PCHEMI	1001-621	1415203.0		Reporting	
	•	:					•	Limits	15/5
Cmpd#	Compound		CAS #	R.T.	Qion	Area	pyly	r.pbv	Reco
1	Chiorobenzenó-d5 (IS)	<del>.</del>		13.0	છ 117.0	xO 105388		·	700
2	Dichlorodifluorpmethana (12)	. 7:	5-71-8	2.:				U.9	
3	Chloromethans		¥-87-3	0.0				0.9	
4	1,2- Cl- 1,1,2,2-F ethans (114)		3-14-2	0,0				0.8	
5	Vinyl chloride		-01-₹	<b>0</b> .0				0.9	
6	1,3-Butadiene		6-99-0	0.0				0.9	
7	Bromomethana		-83-9	0.0				0.9	
	Chloroethane		-00-3	0.0				0.9	
8	Trichlorofluoromethane (11)		-69-4	0.0			ND	0.9	
9	-		-05-4 -35-4	0.0					
10	1,1-Dichloroethene 1,1,2- Cl 1,2,2- F ethane (113)		-33 <del>-3</del> -13-1	0.0			ND	0.9	
• •			- 13- 1 -09-2	0.0			ND	0.9	
	Methylene Chloride			0.00			פא	0.9	
	1,3-dichloroethane		34-3				ND	0.9	
	Methyl t-butyl ether (MTBE)		34-04-4	0.00			סא	0.9	
	cis-1,2-Dichloroethene	, 158	5-59-2	0.00			ND	0.9	
	Bromochloromethane (SS)			9.78		272181	49.5		89%
	Chloroform *		68-3	0.00		0	ND	0.9	
18 1	1,1,1-Trichloroethane		55-6	0.00		0	ND	0.9	•
19 1	2-Dichtoroethane	107	-06-2	0.00	62.00	0	ND	0.9	
20 C	Carbon tetrachtoride	58-3	23-5	0.00	117.00	o i	ND	0.9	
21 E	Senzene	77-	13-2	11.25	78.00	23824	ND	Q. <b>9</b>	
22 1	,4-Difluorobenzene (SS)			11.81	114.00	1305854	49.1		98%
23 T	richloroethene	79-0	1-8	0.00	130.00	Ō	ND	0.9	
24 1.	2-dichloropropane	78-8	7-5	0.00	63.00	0	ND	0.9	
	is-1,3-dichloropropene	542-	75-8	0.00	75.00	0	ND	0.9	
25 T	oluene	108-	88-3	14.24	91.00	94134	1.2	0.9	
.7 tr	ins-1,3-dichloropropene	1006	11-02-6	0.00	75.00	0	ND	0.9	
<b>75</b> 1,	1,2-Trichloroethane	79-0	C-5	13.62	97.00	26728	0.9	0.9	
	strachloroethene	127-	18-4	15.39	164.00	15405	ND	0.9	,
	2-Dibromoethane	106-	93-4	0.00	107.CO	C	ND	0.9	
	tionobenzene	108		0.00	112.00	0	ND	0.9	
	hyl benzene	100-		18.70	91_00	25138	ND	0.9	•
	a-Xylene	1330		16.91	<b>9</b> 1.00	58740	ND	0.9 -	
	Kylene	95-47		17.44	91.00	27883	ND	0.9	
	rene	100-		0.00	104.00	0	NO	0.9	
	22-Tetrachlorcethane	79-34		0.00	83.00	ā	מא	0.9	
٠.	maßuorobeitzene (SS)		•	17.99	95.00	517295	<b>45.0</b>	4.5	90%
	S-Trinethylbenzene	1C8-6	7_2	19.31	105.00	22171	ND	0.9	<b>au ∕e</b>
	4-Trimethylbenzene	95-83		19.84	105.00	48853	ND	0.9	
	-Dichlorobenzene	541-7		0.00	148.00	حدودت 0	NC	0.9	
	zyl chloride	100-4		20.49	91.00	3884C	1.0	0.9	
	-Dichlorobenzene	106-4		0.00	146.00		ND	0.9	
	-Olchlorobenzene -Olchlorobenzene	95-50-		0.00	146.00	0			
	4-Trichlorobenzene	120-8		0.00	180.00	0	ND ND	0.9 0.9	
	a-i numorobenzene achiorobutadiene				225.00				
The state of the s		87-88-				0 ISES L69235.		0.9	
				ymwar.	spaces Of		•		
•	615_10N.D	6:5_2C	~ ~				_3CF.D		

ND - Not Detected at the Reporting Limits.

SS = Surrogata Standard; IS = Internal Standard 50 ng each

CotSPB-1 Fused Silica: 30m x 0.25mm, 0.25u film; direct interfece; -50C for 2 min to 150 @ 6/m; 35-300 amu full scan

<sup>&</sup>quot;utech: -SC Tenax/Anasorb 747 Trap; desorb @ 1800, TO14/15\_lci.

Note that 1,3 butadiene and MTBE are TQ-15 compounds only and not TQ-14 targets.

TU-14A/10:0 bully S Volaties respond

Sampi	Philip/Sevenson North Side PAD 1/3/00				utos impler:	Oll, Fact: 2.5			
Micc:	nation off: 500 ml; can 12538				5970:48				
	d: BACOIS	Fils: C:V	HDCHEWIT	134001	1415207.D		Raporting	•	
	•						Limits	IŠ/Su	
Cmpd	# Compound	CAS #	K.T.	Qlon	Araq	עלפק	ррбу	Recov	
<u>_</u>	Chlorobenzene-d5 (IS)		18.0	9 117.00	1053904	50.0		1005	
2	Dichlorodilluorbmethane (12)	75-71-8	2.2	0 85.00	10825	ND	1.3		
3	Chloromethane	74-87-3	0.0	0 52.00	0	ND	1.3		
4	1,2- Cl- 1,1,2,2-F ethane (114)	76-14-2	0.0	0 85.00	0	ND	1.3		
5	Vinyl chloride	75-01-F	0.00	00.53	0	ПD	1.3		
8	1,3-Butadiene	106-99-0	0.00	54.00	0	ND	1.3		
7	Bromomelhane	74-53-9	0.00	94.00	0	ND	1.3		
8	Chloroethane !	75-00-3	0.00	64.00	. 0	ND	1.3		
9	Trichlorofluoromethane (11)	75-69-4	0.00	101.00	0	DN	1.3		
10	1,1-Dichloroethene	75-35-4	0.00	00,18	0	ND	1.3		
11	1,1,2- Cl 1,2,2- F ethane (113)	76-13-1	0.00	151.00	0	. ND	1.3		
12	Methylene Chlorida	75-09-2	0.00	84.00	. 0	ON	1.3		
13	1,1-dichloroethane	75-34-3	0.00	63.00	0	סא	1.3		
14	Methyl I-butyl ether (MTBE)	1634-04-4	0.00	73.00	O	ND	1.3		
15	cis-1.2-Dichloraethene	158-59-2	0.00	61.00	* 0	ND	1.3		
18	Bromochioromethane (SS)		9.75		261750	47.1		94%	
17	Chloroform	67 <del>-65-</del> 3	0.00		0	ND	1.3		
18	1,1,1-Trichloroethane	71-55-6	0.00	97.00	Ō	ND	1.3		
19	1,2-Dichloroethane	107-06-2	0.00	62.00	Ō	·ND	1.3		
20	Carbon tetrachiorida	58-23-5	0.00	117.00	0	ND	1.3		
21	Benzene :	71-43-2	11.28	78.00	13867	ND	13		
22	1,4-Diffuorcbenzene (SS)		11.83	114.00	1215195	45.3		91%	
23	Trichloroethene	· 79-01-6	0.00	130.00	O	סא	1.3		
24	1.2-dichloropropane	78-37-5	0.00	83.00	Ö	ND	1.3		
25	cis-1,3-dichloropropene	542-75-6	0.00	75.00	0	ND	1.3		
	Toluene	108-88-3	14.24	91.00	54668	ND	1_3		
	trans-1,3-dictrioropropene	10061-02-5	0.00	75.00	O	ND	1.3		
28	1,1,2-Trichloroethane	79-00-5	0.00	97.00	0	סא	1.3		
29	Tetrachioroethene	127-18-4	0.00	164.00	0	ND	1_3		
30	1.2-Olbromoethane	106-93-4	0.00	107.00	0	ND	1.3		
31	Chicrobenzene	108-90-7	0.00	112.00	Ø	מא	1.3		
32	Ethyl benzene	100-47-4	16.70	91.00	13370	ND	1_3		
33 I	nu-Xylene	1230-20-7	16.93	91.00	34106	NO	1.3		
34 6	x-Xylene	95-47-5	17,44	91.00	15591	סא	1.3		
35 5	Styrene	100-42-5	0.00	104.00	O	NC	1.3		
38 1	.1.2.2-Tetrachioroethane	79-34-5	0.00	83.00	. 0	ND	1.3		
7 E	Iromofluorcheizene (SS)		17.99	95.00	5C4879	43.5		87%	
8 1	,3,5-Trimethybeszene	108-67-8	19.13	105.00	15798	ND	1.3		
S 1	24-Trimethylbenzene	95-63-6	19.85	105.00	23403	ND	1.3		
	.3-Okthlorobenzene	541-73-1	0.00	146.00	0	ND	1.3		
	lenzyl chloride	100-44-7	20.48	91.00	258 <i>5</i> 2	ND	1.3		
	.4-Olchlorobenzene	106-46-7	0.00	146.00	0	סא	1.3		
	2-Dichlorobenzene	. 95-5Q-1	0.00	148.00	O	ND	1.3		
	2.4-Trichlorobenzene	120-82-1	0.00	180.00	0	ND	1.3		
5 H	exachlorobutaciene	87-68-3	0.00	225.00	0	סא	1.3		

815\_10N.D

815\_20F.D

615\_30F D

Date Printed:

8/18/00 6:20 PM

Report TO-15RPT3.XLS

ND = NotiDetected at the Reporting Lands. 'SS = Surrogate Standard; IS = Internal Standard 50 ng each

CottSPB-1 Fused SMcat 30rk x 0.25mm, 0.25u filmt direct Interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nuterch: -5C Tenes/Anasorb 747 Trap: desorb @ 160C; TO14/15\_kc.

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

\*EFW/07/LAP 107 309-0

\* ARIA ACCIDED ENTINON NO TOURS

\* MY DOT: 10903 PAIDSE 05-353

\*初期展示了

#### ANALYTICAL REPORT

Client:

Sevenson Environmental Services, Inc.

Project:

195891

Received:

14-AUG-00

Report to:

Mark Nicklas

Sevenson Environmental Services, Inc.

2749 Lockport Road P.O. Box 396

Niagara Falls NY 14304

Reported:

21-AUG-00

Project Description:

Olin Remediation: TO-15 & Library Search

Sampled 8/9/00

Sampled: 09-AUG-00 17:30

RESULT

UNITS

11291 North Side Area A

Lab Sample: 1415205

SEE ATTACHED REPORT.

93017 North Side Area B

Lab Sample: 1415206

SEE ATTACHED REPORT.

12638 North of Pad

Lab Sample: 1415207

SEE ATTACHED REPORT.

0164 Upwind

Lab Sample: 1415208

SEE ATTACHED REPORT.

<sup>&</sup>lt; Indicates less than the limit of quantitation.

177211 1 0 1 0 Dil. Fact: 1.0 Sample: Philip/Sevenson North Side "N" 8/9/00 Autosampler: 3 597014301 กลุ่กิดก อหั; 500ml; can 112ก1 Mloc: Reporting File: KIDEBT/MAHCHEVIC Method: 840015 1-115205.D Limits 1\$/Surr. R.T. ppbv pplri Recovery **UA3** # Q ion Area Cmpd # Compound 100% 18.09 117.00 1021638 50.0 Chlorobanzana-d5 (IS) 0.9 NO 2.22 85.00 17044 75-71-8 2 Dichlorodifluorome:hane (12) 0.9 0.00 ND 74-87-3 52.00 0 Chloromalhane 3 0.00 85.00 0 ND 0.9 78-14-2 1,2- CI- 1,1,2,2-F cthano (114) 4 0.9 0 ND 0.00 62.00 Vinyl chlorids 75-01-4 5 0 ND 0.9 105-99-0 0.00 54.00 6 1.3-Butadiene 0 NO 0.9 0.00 94.00 74-83-9 7 Bromomethane ND 0.9 0.00 64.00 O 75-00-3 8 Chloroethans 6.15 101.00 10297 ND 0.9 Trichlorofluoromethane (11) 75-59-4 ₽ 0.9 1,1-Dichloroethene 75-35-4 0.00 61.00 0 ND 10 0.00 0 ND 0.9 151.00 1.1.2- Cl 1.2.2- F ethane (113) 76-13-1 11 0.9 0.00 84.00 0 ND Methylene Chlorida 75-09-2 12 0 ND 9.0 0.00 1,1-dichloroethane 75-34-3 63.00 13 0.00 0 ND 0.9 1634-04-4 73.00 Mathyl t-butyl ether (MTBE) 14 156-59-2 9.69 ND 0.9 61,00 12139 dis-1,2-Dichloroethene 15 9.74 130.00 288704 54.2 108% Bromochloromethane (SS) 18 9.0 10.08 83.00 10138 ND 67-66-3 17 Chloroform ND 0.9 0.00 18 1.1.1-Trichloroethane 71-55-8 97.00 0 1\_2-Dichloroethane 107-06-2 0.00 82.00 0 ND 0.9 19 ND 0.9 0.00 117.00 Carbon tetrachioride 56-23-5 0 20 0.9 11.25 ND 71-43-2 78,00 29383 21 Benzene 11.81 114.00 1138527 44.2 88% 1.4-Difluorobenzene (SS) 22 0.9 79-01-8 0.00 130.00 ND 0 23 Trichloroethene 0.9 0.00 83.00 0 ND 1.2-dichloropropane 78-87-5 24 542-75-6 0.00 75.00 0 ND 0.9 25 cis-1,3-dichloropropene 14.22 108-88-3 91.00 125021 1.7 0.9 26 Toluene 10061-02-6 0.00 75.00 ND 0.9 trans-1,3-dichloropropene 27 1,1,2-Trichloroethane 0.9 79-00-5 13.83 97.00 31973 1.1 28 15.37 153798 7.4 0.9 154.00 29 Tetrachloroethene 127-18-4

0.00

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0.9

0.9

91%

 Hexachlorobutatione
 87-88-3
 24.54
 225.00
 35685
 2.2
 0.9

 Calibration Data:
 NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv

 615\_10N.D
 615\_20F.D
 815\_30F.D

 Date Printed:
 8/16/C0 5:24 PM
 Report: TO-15RPT3.XLS

NO - Not Detected at the Reporting Limits.

1\_2-Dibromoethane

1.1.2.7-Tetrachloroethane

Bromofluorobenzene (SS)

1.3.5-Trimethylberuene

1.2.4-Trimethyloenzene

1.3-Dichlorobenzene

1.4-Dichlorobenzene

1.2-Dichlorobenzene

1,2,4-Trichlorobenzene

Benzyl chloride

Chlorcherzene

Ethyl benzene

m:p-Xylene

o-Xyiana

Styrene

30

31

32

33

34

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41

42

43

44

45

SS = Surrogate Standard; IS = Internal Standard 50 ng each

CattSPB-1 Fused Silica, 30m x 0.25mm, 0.25u film; direct interface; -SCC for 2 min to 150 @ 8mm; 35-300 emu full scan

106-93-4

108-20-7

100-41-4

1330-20-7

95-47-8

79-34-5

108-57-3

\$5-63-8

541-73-1

100-44-7

106-46-7

95-50-1

120-82-1

100-42-5

Nutsch: -5C Tenex/Anssorb 747 Trap; desorb @ 180C; TO14/15\_lcs.

<sup>&</sup>quot;Note that 1.3-butacrane and MTBE are TC-15 compounds only and not TO-14 targets."

8100 Brownleigh Drive, Suite 120 Raleigh, NC 27617



919 510-0228 Telephone

919 510-0141 Fax

Web Site: www.rtp-labs.com

#### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin

Project No: 195805

Sample Date: 8/8/2000

Matrix: Air in Summa Canister

Analysis Date: 8/9/2000

Date Received: 8/9/2000

Sample ID:

1414849 canister 9334B"Upwind 8/8/2000"

Compound

Estimated ppbv\*

Acetone	132
Methyl Isobutyl Ketone	46
2,4-dimethyl-3-pentanone	43
Butanoic acid, ethyl ester	344
Acetic acid, butyl ester	43
Butanoic acid, propyl ester	296
Pentanoic acid, ethyl ester	167
Pentanoic acid, butyl ester	39
Butanoic acid, 2-methylpropyl ester	112
Propanoic acid, 2-methyl-, butyl ester	52
Butanoic acid, butyl ester	218
Pentanoic acid, propyl ester	71
Hexanoic acid, ethyl ester	321
Camphor	45

<sup>\*</sup>Estimated values were calculated against the  $d_3$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

File: 195805.doc/als

8100 Brownleigh Drive, Suite 120
Raisigh, North Carolina 27617 (new zipcode) Phone: 919-510-0228 Fax: 919-510-0141

Web Site: www.rtp-labs.com

# Chain of Custody Record

ISO 17025 Compliant for Testing Labs



SEVEN JOH ENVIRONMENTAL	Project Menager B,'LL M	Pho 6/0	ne Nus	3-7678	93	Fax Nuraber 18-658-1	Dala: 3766	8/	18/00
100 OLIN Q SI EAMES	57.	<u> </u>		Requ	ested	Analyses	Page	101_	1
WILMINGTON MAS	J. 01885		þ		*		RTP	Labs Proj. T	racking No.:
Contract/Pursbase Order No.: Project Nume:	hediatio a	Preservatives	of Containera		E 8 8 C				
Sample ID No. and Description Date	Time Matrix	P	* Of 0		187			Comments	
12474 HORTH SION AREN A 803		10°N			K				
809 HERTH SIDE AREA B	1600		1		K				
13294 PAD AREA	1600				X				
12630 UPWIND 100	1600				*		<u> </u>		
12256 HORTH JIPE AREA A BOS	1730								
7304 HIRTH JIOL AREA B	1730				K				
TINZ R PAD AREA V	1730 V	J	1						
9334 B 4 P WIND 8 . 8	1730 AIR	14,1	ا		2				
									•
Turn Around Time Requested for Report: Business Days; "Ri		iya	D:	ita Pack: Sid egyonic Dein	Full (	] (1.1x surcher) ] (1.1x surcher)	Possib	le Hazards/ Know	n Concentrations:
Refinquished By:	8/8/vo. 18/0		S S	34.0	701	HE LA	CT	In &	Mine)
Reproductive EXPRESS &  VIA FER A ROILL # 800  File: Chain, RTP, doctals revision 87/2000				colve B:		2		P-Rod	02.304

Sample:	Philip/Sevenson Upwind 8/9/0			٨	uto sampler.	5	DII. FAC	t: 2.6 <u>(</u>
disc:	notion off; 500(n); can 0184	÷						5970748
	e-ioois	File: C:VII	PCHEMIT	3-100\	1415208.0		Reporting	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,							Limits	13/\$
Cmpd#	Compound	CV2 #	R.T.	Qion	Area	ppby	ррбү	Reco
1	Chlorobenzano-d5 (IS)	<del></del>	16.0	9 117.00	947440	50.0		100
2	Dichlorodifluoromethane (12)	75-71-8	2.2	2 85.00	10046	סוא	1.3	
3	Chloromelhano	74-87-3	0.0	52.00	0	ND	1.3	
4	1,2- Cl- 1,1,2,2;F ethanc (114)	76-14-2	0.00	85.00	n	ND	1.3	
	Vinyl chloride	· 75-01-C	0.00	62.00	0	ND	1.3	
6	1,3-Butadiena	106-99-0	0.00	54.00	0	ND	1.3	
	Bromomelhane	74-83-9	0.00	94.00	0	NO	1.3	
	Chloroethane	75-00-3	0.00	64.00	0	ָ אס	1.3	
	Trichlorofluoromethane (11)	75-69-4	0.00	101.00	10	ND	1.3	
-	1.1-Dichloroethene	75-35-4	0.00	61.00	0	ND	1.3	
	1,1,2- Cl 1,2,2-F ethane (113)	76-13-1	, 0.00	151.00	O	ND.	1.3	
	Methylene Chloride	75-09-2	0.00	84.00	0	ND	1.3	
	1,1-dichloroethane	75-34-3	0.00	63.00	0	ND	1.3	
	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00	a 0	ND	1.3	
	ss-1,2-Dichloroethene	156-59-2	0.00	81.00	0	ND	1.3	
	Bromochioromethane (SS)		9,76	130.00	255182	51.6		103%
	Chloroform	67-66-3	0.00	83.00	р	ND	1.3	
	.1.1-Trichloroethane	71-55-8	0.00	97.00	0	ND	1.3	
	2-Dichloroethane	107-06-2	0.00	62.00	0	ND	1.3	wer-
	arbon tetrachioride	56-23-5	0.00	117.00	0	ND	1.3	in-1
	erzene	71-43-2	11.26	78.00	14420	ND	1.3	1
	,4-Difluorobenzene (SS)		11.83	114.00	1110487	48.4		93%
	richloroethene	79-01-6	0.00	130.00	G	ND	1.3	
	2-dichloropropane	78-87-5	0.00	63.00	ō	ND	1.3	
	s-1,3-dichloropropene	- 542-75-6	0.00	75.00	Ö	ND	1.3	
	cluens	108-88-3	14.24	91.00	63508	1.3	1.3	
	ans-1,3-dichloropropene	10061-02-6	0.00	75.00	0	ND	1.3	
	1,2-Trichloroethane	79-00-5	0.00	97.00	0	ND	1.3	
	strachloroethene	127-18-4	0.00	164.00	0	ND	1.3	
	2-Dibromoethane	106-93-4	0,00	107.00	0	DM	1.3	
	nkorobenzene	108-90-7	6.00	112.00	σ	ND	1.3	
	hyl benzene <sup>:</sup>	. 100-41-4	16.70	91.00	13893	ND	1.3	
	p-Xyleme	1330-20-7	16.23	91.00	35619	ND	1.3	
	(yiene	95-47-8	17.46	91.00	15717	ND	1.3	
	rene	100-42-5	0.00	104.00	σ	ND	1.3	
	.2.2-Tetrachioroethane	78-34-5	0.00	83.00	0	ND	1.3	
	molluorobeczene (SS)		17.99	95.00	434581	42.1		84%
	.5-Trimethytoenzene	108-67-3	19.13	105.00	15193	NO	1.3	
	4-Trimethylbenzene	95-83-8	19.85	105.00	18655	ND	1.3	
	-Dichlorobertzene	541-73-1	<b>a.</b> po	146.00	0	NO	1.3	
	nzyl chloride	100-44-7	20.48	91.00	42637	1.8	1.3	
	-Dichlorobenzene	106-46-7	0.00	145.00	, c	ND	1.3	
	-Dichlorobenzene	95-50-1	0.00	146.00	Ō	ND	1.3	
	.4-Trichlorobenzene	120-82-1	0.00	180.00	0	NO	1.3	
5 Hes	cachlorobutádiene	87-68-3	0.00	225.00	٥	ND	1.3	

ND = Not Detected at the Reporting Limits.

Date Printed:

Report TO-15RPT3.XLS SS = Surrogate Standard; IS = Internal Standard 50 ng each

CobSPS-1 Fusied Silica; 30m x 0.25mm, 0.25u film; direct interface; -60C for 2 min to 150 @ 8/m; 35-300 amu full scan

8/17/00 9:31 AM

Nutech: -6C Tenex/Anasorb 747 Trap: desoro @ 180C: TO14/15\_lo.

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Research Triangle Park Laboratories, Luc. 8107 Brownleigh Drive, Suite 120 | Raingle NC 27617



919 510-0223 Telephone 919 510-0141 Fax

Web Site: www.rtp-labs.com

# TENTATIVELY IDENTIFIED COMPOUNDS NISTVEPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin Project No: 195891

Sample Date: 8/9/2000 Ansitysis Date: 8/16/2000 Matrix: Air in Summa Canister
Date Received: 8/14/2000

Sample ID:

1415205 canister 11291 "North Side Area A 8/9/2000 1730 hrs"

Compound Estimated ppby\*

acetone	8
pentane	5
carbon disultide	13
24,4-trimethyl-1-pentene	18
dimethyl disulfide	7
2-ethyl hexanal	5
camphene	18
1-methyl-4-1-methylethyl) 1,3-cyclchexadiene	20
1-mothyl-3-(1-methylethyl) benzene	34

<sup>\*</sup>Estimated values were calculated against the  $d_T$ -Chiorobenzene internal standard assuming a 1:1 response ratio.

Sample TD:

1415206 canister 93017 "North Side Area B 8/9/2000 1730 hrs"

Compound

Estimated poby\*

SCEUDE	6
carbon disulfide	11
2,4,4-trimetryl-1-pentene	12
2-chyl hexanzi	8
1-methyl-4-1-methylethyl) L3-cycloheradiese	8
I-methyl-3-(I-methylethyl) benzene	11

<sup>\*</sup>Estimated values were calculated against the d<sub>f</sub>-Chicrobenzene internal standard assuming a 1:1 response ratio.

File 195805.doc/als

Lighter of Transit Lark many a more than \$100 Brownbrigh Drive. Suite 120 | 1

Releigh, NC 27617

219 \$10-0225 Telephone Web Ste. www.rlp-labs.com 919310-0141 Fax



#### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin

Project No: 195891

Sample Date: 8/9/2000

Matrix: Air in Summa Canister

Analysis Date: 8/16/2000

Date Received: 8/14/2000

Sample ID:

1415207 canister 12638 "North Side Pad 8/9/2000 1730 hrs"

Compound

Estimated ppby\*

Carbon disulfide	9
Butanal	24
Formic acid, butyl ester	24
I-Hexanol	7
1-methyl-4-1-methylethyl) 1,3-cyclchexadiene	10

<sup>\*</sup>Estimated values were calculated against the  $d_j$ -Chlorobenzene internal standard assuming a 1:1 response

Sample ID:

1415208 canister 0164 "Upwind 8/9/2000 1730 hrs"

Compound

Acetic acid, methyl ester

٠	13

Estimated poby\*

Butanal 8 8 Formic acid, butyl ester Hexanai 21 1-Example 13

1-methyl-4-1-methylethyl) 1,3-cyclohexadiene

File: 195891.doc/als

<sup>\*</sup>Estimated values were calculated against the d<sub>f</sub>-Calorobensese internal standard assuming a 1:1 response ratio.

#### Research Triangle Park Laboratories, Inc 8100 Brownleigh Drive, Suite 120 Raielgh, North Carolina 27617 (new zipcode) Phone: 919-510-0228 Fax: 919-510-0141 Web Site: www.rip-labs.com

# Chain of Custody Record

ISO 17025 Compliant for Testing Labs



Seven son	Bill	/M.	ject Manager	Phose 6/0-			197	<b>8-65</b>	12 Number 8-8766	Date: 8/11/00	
clo olin @ 51 Gar	nes St.				Requested Analyses			ed Ana	llyses	Pageol	
Wilmington	M A Sta		Zip Gode		<b>20</b>				-	RTP Labs Proj. Tracking	No.:
Contract/Purchase Order No.:	Piajaci Numa: Olin Reme	diatio	h		Contain		A PO	ECH ECH		771958	
Sample ID No. and Description	Date :	Time :	Air. Lia. Sollá	1	_ Ö	\	1782	N A		Comments	Freeffon
1241 North side Area A	8/4/00	1730	HIR	"avg	1		$\checkmark$	4_	<u> </u>	1415205	
13017 North side Area B	8/1/00				1					1415206	
12638 North of pad	8/4/00	V			1					14/5207	 
0164 upwind	8/9/00	·			1					14/5208	
12618 North Side Area.	4 8/10/00	1530								no analysis,	
12467 North side Area 93081 North of Page				$\frac{1}{}$	1					Sjust cleaning	<u> </u>
A301 upwind	\$/10/00	1530	AIR	M	!  						
					<u> </u>						-
		_									rimanifer - v
Turn Around Time Requested for Report				daya	Dai Ele	e Peck: S ctronic D	ellaet	Full []	(1.1x surche (1.1x surchs	Possible Hazards/ Known Conca	ntrailer et
Rasingulahed By:		(/Qo		me:	B.a	eatived Dy S	hi'e	pina	Lac	time Bater	Iku:
Retinquistrus Byr  VIA FGD FKPRGSS  File: cheln_RTP.doc/els revision 6777000	AIRBILL	Date		****		calved B		Pell	is	Maylesh: 8-14-0	Thus: #/6,{

The Table



#### INDUSTRIAL HYGIENE

#### **ENVIRONMENTAL TESTING**

• EPA/NVLAP 101262-0

• AIHA ACCREDITATION NO. 100439

• NY DOH 10903 • PA DER 06-353 \*NJ DEP 77678

Client:

Sevenson Environmental Services, Inc.

Project:

196137

RESULT

UNITS

CONCENTRATION UNITS

METHOD

A305 Northside Area B

Lab Sample: 1416508

sampled: 17-AUG-00 15:00

See Attached Report

12832 Northside Soii Pad

Lab Sample: 1416509

sampled: 17-AUG-00 15:00

See Attached Report

93214 Gate to Biopad (Downwind)

Lab Sample: 1416510

sampled: 17-AUG-00 15:00

See Attached Report

Final sample concentrations calculated from sample areas supplied on chain of custody. < Indicates less than the limit of quantitation.



#### INDUSTRIAL HYGIENE

#### **ENVIRONMENTAL TESTING**

\*EPA/NVLAP 101262-0

AIHA ACCREDITATION NO. 100439

• NY DOH 10903 • PA DER 06-353 \*NJ DEP 77678

### **ANALYTICAL REPORT**

Client:

Report to:

Sevenson Environmental Services, Inc.

Project:

196137

Mark Nicklas

Received:

21-AUG-00

Sevenson Environmental Services, Inc. 2749 Lockport Road

P.O. Box 396

Niagara Falls NY 14304

Reported:

31-AUG-00

Project Description:

Olin Remediation

TO-15 plus Library Search

RESULT

UNITS

CONCENTRATION UNITS

**METHOD** 

93023 North Side Area A (Upwind)

Lab Sample: 1416503 sampled: 15-AUG-00 17:00

See Attached Report

9349B North Side Area B

Lab Sample: 1416504

sampled: 15-AUG-00 17:00

See Attached Report

11373 North Side Soil Pad

Lab Sample: 1416505

sampled: 15-AUG-00 17:00

See Attached Report

9624B Gate to biopad (Downwind)

Lab Sample: 1416506

sampled: 15-AUG-00 17:00

See Attached Report

12610 Northside Area A (Upwind)

Lab Sample: 1416507

sampled: 17-AUG-00 15:00

See Attached Report

TO-14A/1015 GU/IVIS VOIBILIES NEPULL

Sample:	Philip 196737 Sevenson 8/17/	00 N.Side B		A	utosampler: 8	<u>,                                    </u>	Dil. Fact	3.1
Misc:	nation off: 500ml; can A306	İ			·			5970MSD1
Method:	<b>`</b>	File: C:VHPC	CHEMINS:	2300\	1418508.D		Reporting	
weno-					• • • • • • • • • • • • • • • • • • • •		Limits	15/Sum
Cmpd #	. Compound	CAS#	R.T.	Q ion	Area	ppbv	ppbv	Recover
1	Chlorobeazene-d5 (IS)		16.09	CONTRACTOR OF THE PARTY OF THE	616578	50.0		100%
2	Dichlorod fluoromethane (12)	75-71-8	2.15			ND	1.6	
3	Chioromethane	74-87-3	0.00			ND	1.6	
4	1.2- CI- 1,1,2,2-F ethane (114)		0.00			ND	1.6	
5	Vinyl chloride	75-01-4	0.00		Ö	ND	1.6	
6	1.3-Butadiens	106-99-0	0.00		Ö	ND		
7	Bromomethane	74-83-9	0.00		Ö	ND	1.6	
8	Chloroethane	75-00-3	0.00		0	ND	1.6	
8.	Trichlorofiuoromethane (11)	75-69-4	6.12		33089	3.4	1.6	,
10	1,1-Dichloroethens	75-35-4	6.48		14439	ND	1.6	•
11	1,1,2- Cl/1.2.2- F ethane (113)		0.00		0	ND	1.6	
12	Methylene Chloride	75-09-2	0.00		ō	ND	1.6	
13	1.1-dichloroethane	75-34-3	0.00	63.00		ND	1.6	
14	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00	0	ND	1.6	
15	cis-1,2-Dichloroethene	156-59-2	0.00	61.00	-	ND	1.6	
	Bromochioromethane (SS)	100-03-2	9.76	130.00	176261	54.8	10	110%
16 17	Chloroform	67-68-3	0.00	83.00	0	ND	1.6	l i U A
18	•	71-55-6	0.00		0	ND	1.6	
19:	1,1,1-Trichloroethane	107-06-2	0.00	97.00	מ	ND	1.5	
	1.2-Dichloroethane			62.00	<del>-</del>		1.6	
20 21	Carbon fetrachloride	56-23-6 71-43-2	0.00	117.00	72700	ND ND	1.8	
	Benzene	(1-43-2	11.25	78.00	28309		1.0	4009/
22	1.4-Diffuorobenzene (SS)	TO 04 C	11.81	114.00	825265	53.0	4.0	106%
	Trichlordethene	79-01-6	0.00	130.00	0	ND	1.6	
24	1,2-dichloropropane	78-87-5	0.00	63.00	0	ND	1.6	
	cis-1,3-dichloropropene	542-75-8	0.00	75.00	0	NO	1.6	
	Toluene	108-88-3	14.21	91.00	229173	8.8	1.5	
	trans-1,3-dichioropropene	10061-02-8	0.00	75.00	0	ND	1.6	
	1.1,2-Trichloroethane	79-00-5	0.00	97.00	0	ND	1.6	
	Tetrachloroethene	127-18-4	0.00	164.00	0	ND	1.6 1.6	
•	1,2-Dibromoethane Chlorobenzene	106-93-4	0.00	107.00	0	ND ND	1.6	
	Ethyl benzene	108-90-7 100-41-4	16.69	112.00 91.00	0 20217	ND	1.6	
	m.p-Xylene	1330-20-7	16.91	91.00	20217 54789	ND	1.6	
	o-Xylenia	95-47-6	17.42	91.00 91.00	23296	ND	1.6	
•	· · · · · · · · · · · · · · · · · · ·	100-42-5						
	Styrene	· ·	0.00	104.00	0	ND	1.6	
	1.1,2.2-Tetrachloroethans	79-34-5	0.00	83.00	0	ND	1.5	
	Bromofluorobenzene (SS)		17.99	95.00	316332	47.0		94%
	1,3,5-Tomethytherizene	108-67-8	19.29	105.00	18595	ND	1.6	
	1,2,4-Trimetryfbenzene	95-63-6	19.82	105.00	29323	ND	1.6	
	1,3-Dichlorobenzene	541-73-1	20.02	146.00	11724	ND	1.6	
	Benzyl chloride	100-44-7	20.18	91.00	65709	5.1	1.6	
	1,4-Dichlorobenzene	108-46-7	20.02	148.00	11724	NO	1.6	
•	1,2-Dichlorobenzene	95-50-1	0.00	148.00	0	ND	1.6	
	1,2,4-Trichlorobenzene	120-82-1	0.00	180.00	0	ND	1.6	
	lexachlorobutadiene	87-68-3	0.00	225.00	0	NO	1.6	
1		raceable Standard	yunder.	obscus (				:
*	615_10N,D  Date Printed: 8/2	615_20F.D 4/00 9:39 AM	Report 1			5_30F.D		

NO = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Cot:SPB-1 Fused Silica: 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutsch: -5C Tensu/Anasorb 747 Trap; desorb @ 180C; TO14/15\_tcl.

<sup>&</sup>quot;Note that 1,3-butsdome and MTBE are TO-15 compounds only and not TO-14 targets."

TO-14A/IUID GU/IVID

Sampie:	Philip 196/137 Sevenson 8/17/	N N. Side A		A	utoesmpler: 7		Dil. Fact	<b>≒ 1.8</b>
Misc:	nation off: 500ml; can 12610	•						5970MSD1
Method:	T	File: C:VH	PCHEM1182	300/	1416507.D		Reporting	
Man raser.							Limits	IS/Surr.
Cmpd #	Compound	CA3 <sup>†</sup> #	R.T.	Q ion	Ar <del>on</del>	ppbv	vdqq	Recovery
4	Chlorobenzene-d5 (IS)		16.09	117.00	674732	50.0		. 100%
2	Dichiorodifiuoromethene (12)	75-71-8	2.17	85.00		ND	0.9	
3	Chloromethane	74-87-3	0.00	52.00	0	ND	0.9	
3 4	1,2- CF 1,1,2,2-F ethane (114)	76-14-2	0.00	85.00	O	ND	0.9	
5	Vinyl chloride	75-01-4	0.00	62.00	0	ND	0.9	
6	1,3-Butadiene	108-9910	0.00	54.00	0	ND	0.9	
7	Bromomethane	74-83-9	0.00	94.00	0	ND	0.9	
8	Chloroethane	75-00-3	0.00	64.00		סא	0.9	
8.	Trichlorofluoromethane (11)	75-69-4	6.12	101.00	26608	1.4	0.9	,
10	1,1-Dichloroethens	75-35-À	6.47	61.00	10119	ND	0.9	•
11	1.1.2- Cl.1.2.2- F ethans (113)	76-13-1	0.00	151.00	0	ND	0.9	
12	Methylerie Chloride	75-09-2	0.00	84.00	0	ND	0.9	
13	1,1-dichloroethane	75-34-3	0.00	63.00	O	DИ	0.9	·
14	Methyl t-butyl ether (MTBE)	1834-04-4	0.00	73.00	0	ND	0.9	
15	cis-1,2-Dichloroethene	155-59-2	0.00	61.00	<u>,</u> 0	ND	0.9	
16	Bromochloromethane (SS)		9.75	130.00	184920	52.5		105%
17	Chloroform	67-66-3	0.00	83.00	٥	ND	0.9	
18	1,1,1-Trichloroethane	71-55-6	0.00	97.00	0	ND	0.9	
19	1.2-Dichloroethane	107-08-2	0.00	62.00	. 0	ND	0.9	
20	Carbon letrachloride	<del>56-</del> 23-5	0.00	117.00	. 0	ND	0.9	
21	Benzenė	71-43-2	11.25	78.00	26973	ND	0.9	
22	1,4-Diffuorobenzene (SS)	!	11.81	114.00	891799	52.4		105%
23	Trichloroethene	79-01-6	0.00	130.00	0	ND	0.9	
24	1,2-dichioropropane	78-87-5	0.00	63.00	O	ND	0.9	
25	cis-1,3-dichloropropene	542-75-8	0.00	75.00	٥	ND	0.9	
26	Toluena	108-88-3	14.21	91.00	179876	3.6	0.9	
27	trans-1,3-dichloropropene	10061-02-	6 0.00	75.00	O	ND	0.9	
28	1,1,2-Trichloroethane	79-00-5	0.00	97.00	0	ND	0.9	
29	Tetrachloroethene	127-18-4	0.00	164.00	0	מא	0.9	
30	1,2-Dibromoethane	106-93-4	0.00	107.00	0	ND	0.9	÷ *
31	Chlorobenzene	108-90-7	0.00	112.00	O	ND	0.9	,
32	Etryl benzane	100-41-4	16. <del>60</del>	91.00	19596	ND	0.9	٠
33	m.p-Xylene	1330-20-7		91.00	52257	ND	0.9	
	o-Xylenia	95-47-8	17.42	91.00	21772	ND	0.9	
35	Styrene	100-42-5	17.34	104.00	10588	ND	0.9	
	1.1,2,2-Tetrachiomethane	79-34-5	· D.00	83.00	0	ND	0.9	
	Bromoficorobenzene (SS)	1	17.97	95.00	355071	48.3		97%
	1.3.5-Trimethylbenzene	108-67-6	19.29	105.00	20335	ND	0.9	
	1.2.4-Trimethylbergene	95-63-6	19.82	105.00	28317	ND	0.9	
	1,3-Dichlorobenzene	541-73-1	20.02	146.00	11926	ND	0.9	
41	Benzyl chloride	100-44-7	20.18	91.00	59550	2.4	0.9	
	1,4-Dichlorobenzene	106-46-7	20.02	145.00	11926	ND	0.9	
	1,2-Dichlorobenzene	95-50-1	0.00	146.00	0	ND	0.9	:
	1,2,4-Trichlorobenzene	120-82-1 87-68-3	0.00 0.00	180.00 225.00	0	ND ND	0.9 0.9	
	Hexachlorobutadiene Calibration Data: NEST 1	e r-co-s receable Stand					A-9.	

Calibration Data: NIST Traceable Standard Cylinder: Spectra Gases L69236. 1ppmv

> 615\_20F.D 615\_30F.D 8/24/00 9:37 AM Report TO-15RPT3.XLS

Date Printed:

615\_10N.D

ND = Not Detected at the Reporting Limits. SS = Surrogate Standard; iS = Internal Standard 50 ng each Col:SPS-1 Fused Silics: 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 arms full scan Nutsch: -SC Tenax/Anasoro 747 Trap; desorb @ 180C; TO14/15\_ld.

<sup>&</sup>quot;Note that 1,3-butadiane and MTSE are TO-15 compounds only and not TO-14 targets."

Sample: Philip 196137 Sevenson 8/17/00 N.Side SonPa Autosampler: 9 Dil. Fact: 1.8 5970MSD1 nation off 500ml; can 12832 MISC: File: C:\HPCHEM\1\82300\ 1416509.D Reporting Mathod: 82300IS Limits IS/Surr. vdqq Recovery ppby R.T. Area CAS# Q ion Cmpd # Compound 18.07 117.00 822936 50.0 100% Chlorobenzene-d5 (IS) 1 9.0 19021 ND 75-71-8 2.15 85.00 2 Dichlorodifluoromethane (12) 0 ND 0.9 0.00 52.00 74-87-3 Chloromethane 3 0.9 0 ND 76-14-2 0.00 85.00 1.2- CF 1:1.2.2-F ethane (114) 4 ND 0.9 0 0.00 62.00 Z5-01-4 5 Vinyl chloride ND 0.9 0 106-99-0 0.00 54.00 6 1.3-Butadiene ND 0.9 0 7 Bromomethane 74-83-9 0.00 94.00 ND 0.9 75-00-3 00.0 64.00 0 8 Chloroethane 75-69-4 6.10 101.00 59802 2.7 0.9 Trichloroffuoromethane (11) 8 23468 ND 0.9 1,1-Dichloroethene 75-35-4 6.44 61.00 10 ND 0.9 76-13-1 0.00 151.00 0 1,1,2- Cl.1,2,2- F ethane (113) 11 ND 0.9 0 75-09-2 0.00 84.00 12. Methylenie Chloride Q ND 0.9 13 1,1-dichloroethane 75-34-3 0.00 63.00 0 ND 0.9 1634-04-4 0.00 73.00 14 Methyl t-butyl ether (MTBE) 0 ND 156-59-2 0.9 15 cis-1.2-Dichloroethene 0.00 61.00 9.74 130,00 237928 55.4 111% 18 Bromochloromethane (SS) 0.9 57-86-3 0.00 83.00 0 ND 17 Chloroform ND 0.9 0.00 18 1.1.1-Trichloroethane 71-55-6 97.00 O 19 1,2-Dichloroethane 107-06-2 0.00 0 ND 0.9 62.00 Carbon tetrachloride 56-23-5 00.0 117.00 0 ND 0.9 20 71-43-2 903219 0.9 21 11.16 · 78.00 18.7 Benzene 22 1.4-Diffuorobenzene (SS) 11.81 114.00 1064766 51.3 103% 79-01-6 23 0.00 130.00 ND 0.9 Trichloroethene 0 ND 0.9 24 1.2-dichloropropane 78-87-5 0.00 63.00 0 25 542-75-6 0.00 75.00 ND 0.9 cis-1,3-dichloropropens 2415042 0.9 26 108-88-3 14.16 : 91.00 41.2 Toluene 10061-02-6 14.16 10.75.00 .001 20885 ND 0.9 27 trans-1,3-dichloropropens 1.1.2-Trichloroethane 28 79-00-5 0.00 97.00 0 ND 9.9 29 Tetrachioroethene ND 127-18-4 15.37 164.00 10934 0.9 30 1,2-Dibromoethane 106-93-4 0.00 107.00 0 ND 0.9 31 Chlorobenzene 108-90-7 0.00 112.00 0 ND 0.9 32 Ethyl benzene 100-41-4 16.67 91.00 83478 1.0 0.9 33 1330-20-7 18,80 1.1 0.9 m.p-Xylene 91.00 131875 0.9 34 o-Xylene 95-47-6 17.43 00.19 **2203**9 1.5 100-42-5 17.32 17378 ND 0.9 35 Skyrene 104.00 ND 36 1,1,2,2-Tetrachioroethane 78-34-5 0.00 83.00 0.9 0 37 Brownolly or oberzance (SS) 17.97 95.00 413514 46.1 92% 108-57-8 19.27 ND 0.9 38 1,3.5-Trimethythenzene 105.00 26692 30 1,24-TrimetryDenzene 95-63-6 19.82 105.00 56176 ND 0.9 40 ND 1,3-Dichlorobenzene 541-73-1 20.01 148.00 19008 0.9 0.9 41 Benzyl chloride 100-44-7 20.18 91.00 134608 4.6 19008 0.9 42 1,4-Dichlorobenzana 105-48-7 20.01 148,00 ND ND 0.9 43 95-50-1 0.00 146.00 0 1,2-Dkhlorobenzene 1.2.4-Trichlorobenzene 0.00 \_ 180.00 0 ND 0.9 44 120-82-1 ND 0.9 87-88-3 0.00 0 45 Hexachlorobutadiene 225.00 NIST Traceable Standard Cylinder: Spectra Geses L69236, 1ppmv Calibration Data: 615\_30F.D

615\_10N.D Date Printed:

615\_20F.D 8/24/00 9:41 AM

Report: TO-15RPT3.XLS

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct Interface; -60C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutsch: -5C Tensx/Anesorb 747 Trap; desorb @ 180C; TO14/15\_lci.

<sup>&</sup>quot;Note that 1,3-butediane and MTBE are TO-15 compounds only and not TO-14 targets."

Sample:		00 Gate to BioPa	,	٨	utocampier: '	10	DII. Fa	
Misc:	nation off: 500ml; can 93214						979 a s 446	5970MSD1
Method:	82300IS : :	File: C: WP	CHEM11482	300/	1416510.D	•	Reportin	<del></del>
1			bs. 200			on on hour a	Limits	
Cmpd*#	Compound	CAS <sub>'</sub> #	R.T.	Qion	Area	bbpA	Aqdd	Recovery
1:	Chlorobenzene-d5 (IS)	£	16.07	117.00		50.0	0.8	100%
2	Dichlorodifluoromethane (12)	75-71-8	2.11	85.00		ND	0.8 0.8	•
3	Chloromethane	74-87-3	0.00	52.00	0	ND		
4	1,2- CF 1,1,2,2-F ethane (114)		0.00	85.00		ND	D.8	
5	Vinyl chloride	75-01-4	0.00	62.00	0	ND	0.8	
6.	1,3-Butadiene	106-99-0	0.00	54.00	0	ND ND	0.8 0.8	
7	Bromomethane	74-83-9	0.00	94.00	*		0.8 D.8	
8	Chloroethane	75-00-3	0.00	64.00	0 .	ND	0.8 0.8	•
9	Trichlorofluoromethane (11)	75-69-4	6.08	101.00	64057	2.3		
10	1.1-Dichibroethene		8.42	61.00	30290	סא	0.8	
11	1,1,2- Cl 1,2,2- F ethane (113)		0.00	151.00	0	ND	0.8	
12	Methylene Chloride	75-09-2	0.00	84.00	0	ND	0.8	
13	1.1-dichloroethane	75-34-3	0.00	63,00	0	ND	0.8	
14	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00		DN	0.8	
15	cis-1,2-Dichloroethene	1 <del>56</del> -59-2	0.00	61.00	O	ND	0.8	
	Bromochioromethane (SS)		9.74	130.00	259566	53.9		108%
17	Chloroform	<i>67-66-</i> 3	0.00	83,00	0	ND	<b>D.8</b>	
18	1.1.1-Trichloroethane	71-55-8	0.00	97.00	0	ND	8.0	
19	1,2-Dichloroethans	107-06-2	0.00	62.00	0	DN	0.8	
20	Carbon fetrachionide	56-23-5	- 0.00	117.00	0	ND	0.8	
21	Benzene	71-43-2	11.21	78.00	67319	::3: <b>4.4</b>	0.8	* **
22	1,4-Diffucrobenzene (SS)	ů.	11.80	114.00	1255800	54.0		108%
23	Trichloroethene	79-01-6	0.00	130.00	0	ND	. O.8	•
24 .	1,2-dichloropropane	78-87-5	0.00	63.00	<b>D</b>	ND	j≎. <b>0.8</b>	
25	cis-1,3-dichloropropene	542-75-8	0.00	75.00	Đ	ND	· 0.8	
26 .	Toluene	108-88-3	14.19	91.00	416269	· 7 5.7	. 0.8 ينيد	الوجوان أريها ويأبانا عبدية وفالا أحاري
27	trans-1,3-dichloropropene	10061-02-6	0.00	75.00	<b>o</b>	ND	0.8	
28	1,1,2-Trichloroethane	79-00-5	0.00	<b>\$7.00</b>	0	ND	0.8	
29	Tetrachionoethene	127-18-4	0.00	164.00	0	ND	0.8	
30	1,2-Dibromosthane	106-93-4	0.00	107.00	0	ND	0.8	स्पर्वे करी त
31 (	Chlorobenzene	108-90-7	0.00	112.00	O	DN	0.8	
32	Ethyl berzene	100-41-4	16.69	91.00	36827	NO	0.8	
33 1	m_p-Xyløne	1330-20-7	16.80	91.00	99631	ND	0.8	
	o-Xylena	95-47-8	17.42	<b>91.00</b>	38115	ND	0.8	٠
	Styrene	100-42-5	17.32	104.00	17452	ND	0.8	
	1,1,2,2-Tetrachloroethane	79-34-5	0.00	83.00	D	NO	0.8	
	Bromofiuorobenzene (SS)		17.97	95.00	456182	45.4		91%
	1,3,5-Trimethylbenzene	108-67-8	19.27	105.00	27517	ND	8.0	
	1.2.4-Trimethylbarzene	95-63-6	19.82	105.00	51669	ND	0.8	
	1,3-Dichlorobenzene	541-73-1	20.01	146.00	19789	ND	8.0	
	Benzyl chloride	100-44-7	20.18	91.00	165823	4.6	0.8	
	1,4-Dichlorobenzene	106-48-7	20.01	146.00	19789	ND	0.8	
	1,2-Dichloroberzene	95-50-1	0.00	146.00	0	סא	0.8	
	2.4-Trichlorobenzene	120-82-1	0.00	180.00	0	ND	0.8	
	dexactionobutadiene	87-88-3	0.00	225.00	Ö	ND	0.8	
WWW.		Traceable Standar						HIRTOGRAPH CO. C. C. C. C. C. C. C. C. C. C. C. C. C.
•	615_10N.D	815_20F.D				5_30F.D		

ND = Not Detected at the Reporting Limits. \$8 \* Surrogate Standard; IS \* Internal Standard 50 ng each
Cot:SPB-1 Fused Silica: 30m x 0.25mm, 0.25u film; direct interface: -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_td.
"Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Sample:	Philip 196137 Sevenson 8/15/	00 N.Side A		A	utosampler: 3		Dil. Fact	
Misc:	nation off; 500ml; can 93023						D	5970MSD1
Method:	82300IS	File: C:VHPC	HEM/1/82	300/	1418503.D		Reporting Limits	IS/Surr.
		cas'#	RT.	Qion	Area	ppbv	ppbv	Recovery
Cmpd#	Compound	Agency 1	18.07	117.00		50.0		100%
1 !	Chlorobenzene-d5 (IS)	75-71-8	2.18	85.00		ND	1.0	,0071
2	Dichlorodifluoromethane (12)	74-87-3	0.00	52.00		ND	1.0	
3	Chloromethane		0.00	85.00		סא	1.0	
4 .	1,2- Cl- 1,1,2,2-F ethane (114)	75-01-4	0.00	62.00		ON.	1.0	
5	Vinyl chloride	105-99-0	0.00	54.00	0	ND	1.0	
6	1,3-Butadiene	74-83-8	0.00	94.00	0	ND	1.0	
7	Bromomethane	75-00-3	00.0	64.00	0	ND.	1.0	
8	Chloroethane	75-69-4	0.00	101.00		ND	1.0	
9:	Trichlorofluoromethane (11)	75-35-4	0.00	61.00	Ö	סא	1.0	٠
10	1,1-Dichloroethene		0.00	151.00	Ö	ND ND	1.0	
11	1,1,2- Cl 1,2,2- F ethane (113) Methylene Chloride	75-09-Z	0.00	84.00	0	ND	1.0	
12 13	1.1-dichionoethane	75-34-3	0.00	63.00	0	ND	1.0	
		1634-04-4	0.00	73.00	ő	ND	1.0	
14	Methyl t-butyl ether (MTBE)				mi.			
15	cis-1,2-Dichloroethene	156-59-2	0.00	61.00	0	ND	1.0	4.500
16	Bromochloromethane (SS)		9.74	130.00	180857	54.6	4.0	109%
17	Chloroform	67-86-3	0.00	83.00	0	ND	1.0	
18	1,1,1-Trichloroethane	71-55-6	0.00	97.00	0	ND	1.0	
19	1.2-Dichloroethane	107-06-2	0.00	62.00	0	ND	1.0	
20	Carbon tetrachioride	56-23-5	0.00	117.00	0	ND	1.0	
21	Benzene	71-43-2	11.23	78.00	15052	ND	1.0	
	1,4-Difluoroberzene (SS)		11.81	114.00	9517D2 _	59.4		119%
•	Trichloroethene	79-01-6	0.00	130.00	0	ND	1.0	
	1,2-dichloropropane	78-87-5	0.00	63.00	0	ND	1.0	
	cis-1,3-dichloropropene	542-75-6	0.00	75.00	. 0	ND	1.0	
	Toluene	108-88-3	14.19	91.00	208828	5.0	1.0	
	trans-1,3-dichloropropene	10061-02-6	0.00	75.00	0	ND	1.0	
	1,1,2-Trichioroethane	79-00-5	14.36	97.00	12766	ND	1.0	
	Tetrachloroethene	127-18-4	15.37	164,00	22613	1.9	1.0	
	1,2-Dibromoethane	106-93-4	0.00	107.00	0	ND	1.0	
	Chlorobenzene	108-90-7	16.18	112.00	53832	1.7	1.0	
	Ethyl benzene	100-41-4	18.67	91.00	66020	1.1	1.0	
	m.p-Xylene	1330-20-7	16.88	91.00	203634	2.3	1.0	
	D-Xylanac	95-47-6	17.41	91.00	39016	ND	1.0	
	Styrane	100-42-5	17.32	104.00	17834	ND	1.0	
	1,1,2,2-Tetrachioroethane	79-34-5	17.53	83.00	75863	1.9	1.0	
	Bromo@ucrobenzene (SS)	•	17.98	<b>95.00</b>	339007	48.9		98%
	1,3,5-Trimethylbenzene	108-67-8	19.26	105.00	106091	2.3	1.0	
	1.2.4-Trimethylbenzene	95-83-6	19.81	105,00	113610	2.4	1.0	
•	1,3-Dichlorobenzene	541-73-1	19.90	146.00	22659	ND	1.0	
	Benzyl chloride	100-44-7	19.96	91.00	27677	1.3	1.0	
	,4-Dichlorobenzene	106-46-7	20.02	146.00	33432	1.4	1.0	
	1,2-Dichlorobenzene	95-50-1	20.51	146.00	23038	1.0	1.0	•
	.2.4-Trichlorobenzene	120-82-1	23.48	180.00	23113	2.3	1.0	
	iexachlorobutadiene Calibration Data: NIST 1	87-68-3 raceable Standard	24.51	225.00	14323	1.6	1.0	

615\_10N.D

615\_20F.D

615\_30F.D

Date Printed:

8/23/00 5:28 PM

Report TO-15RPT3 XLS

SS = Surrogate Standard: IS = Internal Standard 50 ng each ND = Not Detected at the Reporting Limbs. Col:SPB-1 Fused Silica; 30m x 0.25mm, 8.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan Nutsch: -5C Tenax/Anasorb 747 Trep; desorb @ 180C; TO14/15\_tcl.

<sup>&</sup>quot;Note that 1,3-butsdiene and MTBE are TO-15 compounds only and not TO-14 targets."

Sample:	Philip 198137 Sevenson 8/15/00	N.Side B		A	nosampler: 4	•	DIL Fact	•
Misc:	nation off; 500ml; can 93498							6970MSC
wethod:	82300IS ' F	ile: C:VHPC	HEM/1/82	23001	1416504.D		Reporting	100
1					_		Limits	IS/Su
Cmpd #		CAS #	R.T.	Q lon	Area	ppbv_	ppbv	Recov
1 !	Chlorobenzene-d5 (IS)		18.07	117.00	587828	<i>5</i> 0.0		1009
2 .	Dichlorod fluoromethane (12)	75-71-8	0.00	85.00	0	DM	1.1	
3	Chloromethana	74-87-3	0.00	52.00	0	ND	1.1	
4	1,2- Cl- 1.1,2.2-F ethane (114)	76-1 <del>4</del> -2	0.00	85.00	0	ND	1.1	
5	Vinyl chloride	J5-01-4	0.00	62.00	. 0	ND	1.1	
8 .	1,3-Butadiene	105-99-0	0.00	54.00	O	מא	4.1	
7	Bromomethane	74-83-9	0.00	94.00	0	ND	1.1	
8	Chloroethane	75-00-3	0.00	64.00	0	ND	1.1	
8	Trichlorofluoromethane (11)	75-69-4	00.0	101.00	0	ND	1.1	
10	1,1-Dichloroethene	75-35-4	0.00	61.00	Ď	ND	1.1	
11	1,1,2- Cl 1,2,2- F ethane (113)	76-13-1	0.00	151.00	D.	OM	1.1	
12	Methylene Chloride	75-09-2	0.00	84.00	0	ND	1.1	
13	1,1-dichloroethane	75-34-3	0.00	63.00	0	ND	1.1	
14	Methyl t-butyl ether (MTBE)	1534-04-4	0.00	73.00	<u> </u>	ND	1.1	
15.	cis-1,2-Dichloroethene	156-5 <del>9-</del> 2	0.00	61.00	0	ND	1.1	
16	Bromochioromethane (SS)		9.76	130.00	189482	52.8		106%
17	Chloroform	67-66-3	0.00	83.00	0	ND	1.1	
18	1,1.1-Trichioroethane	71-55-6	0.00	97.00	0	ND	1.1	
19.	1_2-Dichloroethane	107-08-2	0.00	62.00	0	ND	1.1	
20.	Carbon tetrachloride	56-23-5	0.00	117.00	0	ND	1.1	
21	Benzene	71-43-2	11.25	78.00	15294	ND	1.1	
22	1,4-Diffuorobenzene (SS)	•	11.81	114.00	779813	44.9		90%
23	Trichlorgethene	79-01-8	0.00	130.00	O	ND	1.1	
24	1,2-dichloropropane	78-87-5	0.00	63.00	0	ND	1.1	
25	cis-1,3-dichloropropene	542-75 <del>-8</del>	0.00	75.00	O	ND	1.1	
26	Toluena	108-88-3	14.19	91.00	243977	5.8	1.1	
27	trans-1,3-dichloropropene	10081-02-6	0.00	75.00	Ø	ND	1.1	
28	1.1,2-Trichloroethane	79-00-5	0.00	97.00	C	ND	1.1	
29	Tetrachlorosthene	127-18-4	0.00	164.00	O	ND	1.1	
. 30	1,2-Dibromoethane	106-93-4	0.00	107.00	O	ND	1.1	
31	Chlorobenzene	108-90-7	16.16	112.00	26799	ND	1.1	
32 <b>.</b>	Ethyl benzene	100-41-4	16.67	91.00	47536	ND	1.1	
33	m.pXyliene	1330-20-7	16.90	91.00	123456	1.4	1.1	
34	o-Xylene	95-47-6	17.41	91.00	58282	1.2	1.1	
35	Styrene	100-42-5	17.32	104.00	14495	ND	1.1	
38	1.1,2,2-Tetrachloroethane	79-34-5	17.53	83.00	36968	ND	1.1	
	Bromotuorobenzene (SS)	i	17.97	95.00	359193	47.9		96%
	1,3,5-Trimethylbonzene	108-67-8	19.28	105.00	47105	ND	1.1	· <del></del>
	1,2.4-Trimethylbenzene	95-63-6	19.82	105.00	59889	1.3	1.1	
40	1,3-Dichiorobergens	541-73-1	19.91	146.00	13491	ND	1.1	•
	Benzyl chlorida	100-44-7	19.98	91.00	17561	ND	1.1	
	1,4-Dichlorobenzene	106-46-7	20.03	148.00	16103	ND	1.1	
	1,2-Dichlorobenzene	95-50-1	20.51	148.00	14061	ND	1.1	
	1,2,4-Trichlorobenzene	120-82-1	23.49	180.00	13437	1.3	1.1	
	Hexachlorobutadiene	87-68-3	0.00	225.00	D	ND	1.1	:

Calibration Data: NST Traceable Standard Cylinder: Spectra Gases L89236, 1ppmv
615\_10N.D 615\_20F.D 615\_30F.D
Date Printed: 8/23/00 5:29 PM Report: TO-15RPT3.XLS

Col SPB-1 Fused Silica: 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutsich: -5C Tensx/Anasorb 747 Trap; desorb @ 180C; TO14/15\_lci.

NO = Not Detected at the Reporting Limits. SS = Surrogate Standard: IS = Internal Standard 50 ng each
SDR-1 Fire and Stiller: Why y 0.25mm, 0.25mm, 0.25m (for direct interface: ASK) for 2 min to 150 @ A/m; 35,3/fit amu full ac

<sup>&</sup>quot;Note that 1.3-butations and MTBE are TO-15 compounds only and not TO-14 targets."

Sampie:	Philip 196137 Sevenson 8/15/0	A	utosampier: 5		DIL Fact: 2.8			
fire:	nation off 500ml; can 11373						•	<b>5970</b> MSD
Aethod:		File: C:WHP	CHEM1182	3001	1416505.D		Reporting	
•	•					•	Limits	IS/Sun
Cmpd#	. Compound	CAS#	R.T.	Q lon	Area	ppbv	ppbv :	Recoye
5 :	Chlorobenzene-d5 (IS)		18.09	117.00	678848	50.0		100%
2	Dichlorodifluoromethane (12)	75-71-8	0.00	85.00	0	ND	1.4	
3	Chloromethane	74-87-3	0.00	52.00	0	ND	1.4	
4	1,2- CL 1,1,2,2-F ethane (114)	76-14-2	0.00	85.00	0	ND	1.4	
5	Vinyl chloride	75-01- <del>4</del>	0.00	62.00	0	ND	1.4	
6	1.3-Butadisne	106-99-0	0.00	54.00	0	ND	1.4	
7	Bromomethane	74-83-9	0.00	94.00	0	ND	1.4	
8	Chloroethane	75-00-3	0.00	64.00	O	סא	1.4	
9 :	Trichlorofluoromethane (11)	75-69-4	0.00	101.00	0	ND	1.4	
10	1.1-Dichloroethene	75-35-4	0.00	61.00	O	ND	1.4	
11.	1,1,2- Cl:1,2,2- F ethane (113)	76-13-1	0.00	151.00	0	ND	1.4	
12	Methylene Chloride	75-09-2	0.00	84.00	. 0	ND	1.4	
13	1,1-dichiorosthane	75-34-3	0.00	63.00	0	ND	1.4	
14	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00	O	ND	1.4	
	cis-1.2-Dichloroethene	156-59-2	0.00	61.00	- o	ND	1.4	
	Bromochloromethane (SS)	,	9.78	130.00	198479	56.0	•	112%
	Chloroform	87-66-3	0.00	83.00	0	ND ND	1.4	
18	1,1,1-Trichlorosthane	71-55-8	0.00	97.00	ő	ND	1.4	
19	1,2-Dichloroethans	107-08-2	0.00	82.00	Ö	סא	1.4	
	Carbon tetrachloride	56-23-5	0.00	117.00	Ö	ND	1.4	
	Benzené	71-43-2	11.23	78.00	12857	ND	1.4	
	1,4-Difluorobenzene (SS)	11-0-2	11.83	114.00	808586	47.2	1+-4	84%
	Trichloroethene	79-01-6	0.00	130.00	0	ND	1.4	0-476
		79-01-6 78-87-5	0.00		0	סא סא	1.4	
	1,2-dichioropropane	542-75-6	0.00	53.00 75.00	0	ND .	1.4	
	cis-1,3-dichloropropens	108-88-3	•	75.00	71174	2.2	1.4	
	Toluene trans-1,3-dichloropropene	100-00-3	14.23 0.00	91.00 75.00	73 174	ND	1.4	
	1,1,2-Trichlorostriane	79-00-5	0.00		0	D QN	1.4	
•	Tetrachiomethene	127-18-4	15.37	97.00 184.00	60004	8.7	1.4	
	1.2-Dibromoethane	106-93-4	0.00		0	ND	1.4	•
	Chlorobienzene	108-90-7	16.19	107.00 112.00	12141	ND .	1.4	
	Ethyl benzene	100-41-4	16.69	91.00	25960	ND	1.4	
		1330-20-7	16.90	91.00	71610	NO NO	1.4	
	m.p-Xylene	95-47-6	17.43	91.00	24502	ND	1. <del>4</del>	
	o-Xylene	:						
	Styrene	100-42-5	17.32	104.00	12297	ND	1.4	•
	1.1.2.2-Tetractionocthans	79-34-5	17.55	83.00	30154	ND	1.4	
	Bromethumbersene (SS)		17.98	95.00	353728	47.8		96%
	1.3.5-Trimetrytogracerse	108-67-8	19.29	105.00	27889	ND	1.4	
	1,2,4-Trimeshylbenzene	95-63-6	19.83	105.00	36081	NO	1.4	
•	1.3-Dichlorobenzene	541-73-1	20.03	148.00	11500	ND	1.4	4
	Benzyl chloride	100-44-7	19.98	81.00	17471	ND	1.4	
	1.4-Dichlorobenzene	106-46-7	20.03	146.00	11500	NO	1.4	
	1,2-Dichlorobenzane	<del>95</del> -50-1	0.00	146.00	0	NO	1.4	
•	1,2,4-Trichlorobenzene	120-82-1	0.00	180.00	O	ND	1.4	,
45 H	-lexachlorobutadiene	87-68-3	0.00	225.00	0	ND	1.4	,

Date Printed: NO = Not Detected at the Reporting Limits.

8/23/00 5:31 PM Report TO-15RPT3.XLS

SS = Surrogate Standard; IS = Internal Standard 50 ng each Cot:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutech: -6C Tenax/Anasorb 747 Trap: desorb @ 180C: TO14/15\_id.

<sup>&</sup>quot;Note that 1.3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Sample:	Philip 198137 Sevenson 8/1	5700 Gate BioPad		A	utosampler: (	)	DII. Fact	
Misc:	ាងតែភា <i>ច</i> ក្រុំ 500ml; can 96248							5970MSD1
Wethod:	82300IS	File: C: HP	CHEM/1/82	:300\	1416506.D		Reporting	
	<b>:</b>	•					Limits	IS/Sum
Cmpd #	Compound	CAS#	R.T.	Qion	Area	ppbv	ppbv	Recover
1 :	Chlorobenzene-d5 (IS)		15.08	117.00		\$0.0		100%
2	Dichlorodifluoromethan# (12		0.00	85.00		ND	1.5	
3	Chloromethane	74-87-3	0.00	52.00	0	ND	1.5	
4	1.2- Cl- 1.1.2.2-F ethane (11	4) 76-14-2	0.00	85.00	O	ND	1.5	
5	Vinyl chloride	75-01-4	0.00	62.00	0	ND	1.5	
6	1,3-Butadiene	106-99-0	0.00	54.00	0.	ND	1.5	
7	Bromomethane	74-83-9	0.00	94.00	O	ND	1.5	
8	Chlorosthane	75-00-3	0.00	64.00	0	ND	1.5	
9	Trichlorofluoromethane (11)	75-69-4	0.00	101.00	0	ND	1.5	
10	1.1-Dichloroethens	75-35 <del>-</del> 4	0.00	61.00	O	DM	1.5	
11	1,1,2- Cl; 1,2,2- F ethane (11:	3) 76-13-1	0.00	151.00	0	NO	1.5	
12	Methylene Chloride	75-09-2	0.00	84,00	O	ND	1.5	
13	1,1-dichloroethane /	75-34-3	0.00	63.00	٥	ND	1.5	
14	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00	0	ND	1.5	
15	cis-1,2-Dichloroethene	156-59-2	0.00	61.00	ж о	DM	1.5	
16	Bromochioromethane (SS)	•	9.76	130.00	198377	58.2		112%
17	Chloroform	<b>67-66-3</b>	0.00	83.00	0	ND	1.5	
18	1,1,1-Trichiproethane	71-55-8	0.00	97.00	Ö	ND	1.5	
19	1,2-Dichtoroethans	107-06-2	0.00	62.00	0	ND	1.5	
20	Carbon tetractiloride	56-23-5	0.00	117.00	o	ND	1.5	
21	Benzena	71-43-2	11.24	78.00	16227	םא סא	1.5	
22	1,4-Diffuorobenzane (SS)	11-0-2	11.81		882406	51.7	17	4025/
<i>22</i> 23	Trichlorosthene	<del>79-</del> 01-6		114.00		ND	d E	103%
	1,2-dichioropropane	79-01-0 78-87-5	0.00 0.00	130.00	0	NO	1.5	
24 25	cis-1,3-dichloropropene	542-75-8	0.00	63.00	0	ND	1.5	
25 26	Toluene	•		75.00	-		1.5	
2 <del>0</del> 27	· · · · · · · · · · · · · · · · · · ·	108-88-3	14.19	91.00	457218	15.1	1.5	
	trans-1,3-dichloropropens	10061-02-8	0.00	75.00	0	ND	1.5	
28	1,1,2-Trichloroethans	79-00-5	0.00	97.00	0	ND	1.5	
29	Tetrachloroethene 1,2-Dibromoethene	127-18-4	0.00	184.00	Ď	ND	1.5	
30 31	Chiorotienzene	106-93-4	0.00	107.00	0	ND	1.5	•
		108-90-7	16.17	112.00	12200	ND	1.5	
32	Elityl benzene	100-41-4	16.68	91.00	37640	ND	1.5	
4	m.p-Xylene	1330 20-7	16.91	91.00	69641	ND	1.5	
	o-Xylena	<b>95-47-6</b>	17.42	91.00	30514	ND	1.5	
	Styrene	100-42-5	17.33	104.00	15541	מא	1.5	
	1,1,2,2-Tetractilorostrane	<del>79-34</del> -5	17.54	83.00	19877	ND	1.5	
	Bromofluoroberizene (SS)		17.97	₩5.00	350019	47.5		95%
	1,3.5-Trimethylbenzene	108-67-8	19.29	105.00	28009	ND	1.5	
	1,2,4-Trimethylbenzene	95-63-6	19.82	105.00	49348	ND	1.5	
	1,3-Dichlorobenzene	541-73-1	0.00	148.00	۵	ND	1.5	
	Berrzyt chłorice	100 <del>-44-</del> 7	19.97	91.00	20330	ND	1.5	
•	1.4-Dichlorobertzene	106 <del>-46-</del> 7	0.00	145.00	D	ND	1.5	•
	1,2-Dichlorobenzene	95-50-1	0.00	146.00	0	ND	1.5	
	1,2,4-Trichlorobenzens	120-82-1	0.00	180.00	0	ND	1.5	,
	Hexachlorobutadiene	87-68-3	0.00	225.00	0	ND	1.5	
!	Calibration Data: NIST	Traceable Standan	d Cylinder:	Spectra (	3 <b>ases</b> L69236.	1ppmv		
:	615_10N.D	615_20F.D			61:	5_30F.D		•
•	Date Printed: 8.	/23/00 5:12 PM	Report T	O-15RPT	3XLS			•

ND = Not Detected at the Reporting Limits. SS = Surrogate Standard: IS = Internal Standard 50 ng each Col.SP6-1 Fused Silica: 30m x 0.25mm, 0.25u film; direct imerface: -50C for 2 min to 150 @ 8/m; 35-300 arms full scan Nuteth: -8C TenaxiAnasorb 747 Trap; deepro @ 180C: TO14/15\_kd.

<sup>&</sup>quot;Note that 1,3-butsdome and MTBE are TO-15 compounds only and not TO-14 targets."

8100 Brownieigh Drive, Suite 120 Raleigh, NC 27617



919 510-0228 Telephone

919 310-0141 Fax

Web Site: www.rtp-labs.com

#### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin

Project No: 196137

Sample Date: \$/15/2000 Analysis Date: 8/23/2000 Matrix: Air in Summa Canister
Date Received: 8/21/2000

Sample ID:

1416503 canister 93023 "North Side Area A (upwind) 8/15/2000"

Compound , Estimated ppbv\*

2,4-dimethyl pentane	53
3-methyl hexane	82
2,2,4-trimethyl pentane	424
Methyl cyclohexane	85
2,5-dimethyl became	63
2.4-dimethyl bexane	14
2.3.4-trimethyl pentane	257
2,3-dimethyl hexane	82
2-methyl heptane	40
3-methyl heptane	36
2,2,5-trimethyl bexanc	206
1.1.3-trimethyl cyclohexanc	72
1,2,4-trimethyl cyclohexane	40
2,2,5,5-tetramethyl herane	144
2.3.7-trimethyl octane	57
•	

<sup>\*</sup>Estimated values were calculated against the  $d_3$ -Chlorobenzene internal standard assuming a 1:1 response ratio

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#### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin Project No: 196137

Sample Date: 8/15/2000 Analysis Date: 8/23/2000 Matrix: Air in Summa Canister

Date Received: 8/21/2000

Sample ID: Compound

1416504 canister 9349B "North Side Area B 8/15/2000"

Estimated ppbv\*

· ·	
2,4-dimethyl pentane	61
3-methyl bexane	40
2.2.4-trimethyl pentane	240
Methyl cyclobexane	49
Formic acid, butyl eser	21
2.5-dimethyl hexanc	46
2.4-dimethyl bexane	18
2,3,4-trimethyl pentane	160
2.3-dimethyl hexane	42
1.4-dimethyl cyclohexane	24
3-methyl heptane	36
2,2.5-trimethyl hexane	104
1.1.3-trimethyl cyclohecane	. 29
1 1.2 3-tetramethyl cyclobexane	18

<sup>\*</sup>Estimated values were calculated against the  $d_j$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

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File: 196137.doc/als

1-methyl-4-(1-methylethyl) benzene

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#### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin Project No: 196137

Sample Date: 8/15/2000

Matrix: Air in Summa Canister
Date Received: 8/21/2000

Analysis Date: 8/23/2000

Sample ID: Compound 1416505 canister 11373 "North Side Soil Pad 8/15/2000"

Estimated ppbv\*

	:	
Acetone		538
Nitromethane	:	262
2,2,4-trimethyl pentane	•	132
1-aitropropane	•	34
Methyl cyclohexane	<u>;</u>	33
2,3,4-trimethyl pentane		87
2,3,3-triniethyl pentane	:	82
2,2,5-trimethyl hexane		56
1,1,3-trimethyl cyclohexar	ie .	26
3-ethyl-2-methyl heptane		42
1-methyl-4-(1-methylethyl)	1,3-cyclohexadicne	24

Decahydro-2-methyl naphthalene

Sample ID:	1416506 canister 9624B "Gate to Pad (downwind) 8/15/2000"
<u> </u>	**************************************

2-methyl butane	į	23
<del></del>	:	
Acetone ·	*	25
2,3,4-trimethyl pentame	•	68
2,3,3-trimethyl pentame		43
2,2,5-trimethyl became	:	32
I.1.3-trisbathyl cyclobercane	<b>†</b>	14
1,2,4-trimethyl cyclobexane	•	23
1-methyl-4-(1-methylethyl) 1,3-cyclohecu	dienc	<b>\$</b> 0
2.4-dimethyl medicane		41
2-butyl-1,1,3-trimethyl cyclohecane		17
2.3.7-trimethyl octane		56
2,5-dimethyl dodecane		18

<sup>\*</sup>Estimated values were calculated against the  $d_f$ -Chlorobenzane internal standard assuming a 1:1 response ratio.

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#### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin Project No: 196137

Sample Date: 8/17/2000

Matrix: Air in Summa Canister

Analysis Date: 8/23/2000

Date Received: 8/21/2000

Sample ID:

1416507 canister 12610 "North Side Area A (upwind) 8/17/2000"

Compound

Estimated ppby\*

3-ethylidene-1-methyl cyclopentene	80
2,2,3-trimethyl hexane	49
2,6,11-trimethyl dodecane	54
I-methyl-4-(I-methylcthyl) I_3-cyclohexadiese	610
1-methyl-3-(1-methylethyl) beauene	288
2,2,4,6.6-pentamethyl heptane	142
1-methyl-4-(1-methylethyl) 1,4-cyclohecadiene	240
2,2,4-trimethyl beptanc	78
2,7,7-trimethyl decane	49

<sup>\*</sup>Estimated values were calculated against the  $d_f$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

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#### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin Project No: 196137

Sample Date: 8/17/2000

Matrix: Air in Summa Canister

Analysis Date: 8/23/2000

Date Received: 8/21/2000

Sample ID: Compound

1416508 canister A305 "North Side Area B 8/17/2000"

Estimated poby\*

•	
Trimethyl-1,3-cyclopentadiene	135
2,2,3-trimethyl hexane	101
2-methyl decane	112
1-methyl-4-(1-methyethyl) 1,3-cyclobexadiene	1319
1-methyl-4-(1-methyethyl) benzene	487
2,2,4,6,6-pentamethyl heptane	85
1-methyl-4-(1-methyethyl) cyclohexene	647
2,2-dimethyl octane	147

<sup>\*</sup>Estimated values were calculated against the  $d_f$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

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Web Site: www.rip-labs.com

#### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin Project No: 196137

Sample Date: 8/17/2000

Matrix: Air in Summa Canister

Analysis Date: 8/23/2000

Date Received: \$/21/2000

Sample ID:

1416509 canister 12832 "North Side Soil Pad 8/17/2000"

Compound

Estimated ppby\*

396
108
740
118
417
155
298
238

<sup>\*</sup>Estimated values were calculated against the dy-Chlorobenzene internal standard assuming a 1:1 response

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Web Site: www.rtp-labs.com

### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin Project No: 196137

Sample Date: 8/17/2000 | Analysis Date: 8/23/2000

Matrix: Air in Summa Canister Date Received: 8/21/2000

Sample ID:

1416510 canister 93214 "Gate to biopad (downwind) 8/17/2000"

Estimated ppbv\*

Compound

5
5
0
7
5
5
3
3

\*Estimated values were calculated against the  $d_f$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

File: 196137.doc/als

Research Triangle Park Laboratories, Inc.
 8100 Brownleigh Drive, Suite 120

Releigh, North Carolina 27617 (new zipcode)
Phone: 918-510-0228 Fax: 919-510-0141

Web Site: www.rtp-lebs.com

File: chain\_RYP.doc/ale revision 8/7/2000

# Chain of Custody Record

ISO 17025 Complient for Testing Labs



Cliant Project Manager Phone Number Fax Number Sevenson Engranmental 8/18/00 RII M. 610-453-9678 978-608-8766 Requested Analyses C/o Clinap. @ 51 Ennes St Page\_ CHy Zip Code RTP-LEDS Proj. Tracking No.: 0887 196137 Contract/Puschase Order No.: Prolect Name: N Olin Remediation g ... Matrix Sample ID No. and Description Date Time Comments Air, Liq, Solid (npmmd/8/15/20 93023 North ale Are 1700 Air 93498 North side Area B 8/15/00 8/15/00 11373 North sie oil prol 8/15/00 9624B gate to Dopad Chusus 1700 8/16/02 North rile Avent 1000 13/16/00 04313 North Side Area B 8/10/00 12300 North Side Soil and 93078 gate to bopsel 8/10/00 8/17/00 1600 6/17/20 A305 North Side and B 12832 North side soil paid 8/17/00 93214 gale to propose Clause at 8/11/20 Data Pack: Std [] Full [] (1.1x surchar) Ejectronic Deliverable: [] (1.4x surchar) Possible Hazardsi Known Concentrations: Turn Around Time Requested for Report: Business Days; 'Rush Multipliers [Xx) 1 day"(&). 2 days"(3x) 3 days"(2x) 5 days"(1:5x) 10 days"(1:(x) 15 days Three-Three: Rally Wated By .... Shipping lac time 8/18/20 <u>0900.</u> Received By: Date: Time:

OTP. P.82

Sample: Philip 196389 Sevenson 8/25/00 N. Debris Autosampler: 3 Dil. Fact: 1.8 nation off; cryotrap -5C;to15\_lci; 5970MSD1 Misc: Method: 9700IS C:\HPCHEM\1\9700\ 1417728.D Reporting File: Limits IS/Surr. Recovery CAS# R.T. ppbv ppbv Q lon Area Cmpd # Compound 100% 16.07 117.00 1399883 50.0 1 Chlorobenzene-d5 (IS) 0.9 2 Dichlorodifluoromethane (12) 75-71-8 2.17 85.00 15561 ND ND 0.9 74-87-3 0.00 52.00 0 3 Chloromethane 0.00 ND 0.9 4 76-14-2 85.00 0 1,2- Cl- 1,1,2,2-F ethane (114) 0.00 0 ND 0.9 5 75-01-4 62.00 Vinyl chloride 106-99-0 0.00 0 ND 0.9 6 1,3-Butadiene 54.00 0 ND 0.9 7 74-83-9 0.00 94.00 Bromomethane 0 ND 75-00-3 0.00 0.9 8 Chloroethane 64.00 75-69-4 0.00 0 ND 0.9 9 Trichlorofluoromethane (11) 101.00 75-35-4 0.00 61.00 0 ND 0.9 10 1,1-Dichloroethene 76-13-1 0.00 ND 0.9 11 1,1,2- Cl 1,2.2- F ethane (113) 1 151.00 0 0.9 12 Methylene Chloride 75-09-2 7.47 84.00 21550 ND 0.9 75-34-3 0.00 ND 13 1,1-dichloroethane 63.00 0 ND 0.9 14 Methyl t-butyl ether (MTBE) 1634-04-4 0.00 73.00 0 15 cis-1,2-Dichloroethene 156-59-2 0.00 61.00 ٥ ND 0.9 16 Bromochloromethane (SS) 9.71 130.00 329661 44.7 89% 17 Chloroform 67-66-3 0.00 83.00 0 ND 0.9 0.9 18 1,1,1-Trichloroethane 71-55-6 0.00 97.00 0 ND ND 0.9 19 1,2-Dichloroethane 107-06-2 0.00 62.00 0 ND 0.9 20 Carbon tetrachloride 56-23-5 0.00 117.00 0 21 ND 0.9 Benzene 71-43-2 11.21 78.00 42827 22 11.78 64.2 128% 1,4-Difluorobenzene (SS) 114.00 1753444 23 ND 0.9 Trichloroethene 79-01-6 0.00 130,00 0 0.9 24 78-87-5 0.00 0 ND 1,2-dichloropropane 63.00 25 cis-1,3-dichloropropene 542-75-6 0.00 0 ND 0.9 75.00 0.9 26 Toluene 108-88-3 14.17 91.00 622359 13.2 27 trans-1,3-dichloropropene 10061-02-6 0.00 ND 0.9 75.00 0 28 1,1,2-Trichloroethane 79-00-5 0.00 97.00 0 ND 0.9 29 0.9 Tetrachloroethene 127-18-4 0.00 0 ND 164.00 30 0.9 1,2-Dibromoethane 106-93-4 0.00 107.00 0 ND 31 Chlorobenzene 108-90-7 16.12 11965 ND 0.9 112.00 32 91.00 0.9 Ethyl benzene 100-41-4 16.67 59796 ND 33 m,p-Xylene 1330-20-7 16.89 0.9 91.00 126504 ND 34 o-Xylene 95-47-6 17.42 ND 0.9 91.00 51256 35 Styrene 0.9 100-42-5 17.32 104,00 24067 ND 36 1.1,2,2-Tetrachloroethane 79-34-5 17.54 83.00 14463 ND 0.9 37 Bromofluorobenzene (SS) 17.97 95.00 48.8 708576 98% 1,3,5-Trimethylbenzene 38 108-67-8 19.29 105.00 24775 ND 0.9 39 1,2,4-Trimethylbenzene 95-63-6 19.83 105.00 0.9 39417 ND 40 1,3-Dichlorobenzene 541-73-1 19.92 146.00 22459 ND 0.9 41 Benzyl chloride 100-44-7 20.48 0.9 91.00 15568 ND 42 1,4-Dichlorobenzene 20.02 0.9 106-46-7 146.00 ND 27493 43 1,2-Dichlorobenzene 95-50-1 20.52 0.9 146.00 21829 ND 44 1,2,4-Trichlorobenzene 120-82-1 23.49 ND 0.9 180.00 19144 45 Hexachlorobuta diene 87-68-3 24.54 225.00 12307 ND 0.9 NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv

Calibration Data:

615\_10T.D Date Printed:

615\_201.D

9/8/00 9:30 AM

615\_30H.D

ND = Not Detected at the Reporting Limits.

Report: TO-15RPT3.XLS SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Alcacaren a frangic a ara mana, ane-

TO-14A/TO15 GC/MS Volatiles Report

Sample: Philip 196389 Sevenson 8/25/00 North A Autosampler: 4 Dil. Fact: 2.6 nafion off; cryotrap -5C;to15\_lci; 5970MSD1 C:\HPCHEM\1\9700\ Reporting 1417729.D Method: 9700IS File: Limits IS/Surr. Cmpd # Compound CAS# R.T. Q ion Area ppbv ppbv Recovery 16.07 117.00 1528466 50.0 100% Chlorobenzene-d5 (IS) 1 75-71-8 2.18 85.00 11539 ND 1.3 2 Dichlorodifluoromethane (12) 74-87-3 0.00 52.00 0 ND 1.3 3 Chloromethane 76-14-2 0.00 85.00 0 ND 1.3 1,2- CI- 1,1,2,2-F ethane (114) 4 0 ND 1.3 75-01-4 0.00 62.00 5 Vinyl chloride 6 1,3-Butadiene 106-99-0 0.00 54.00 0 ND 1.3 0 ND 1.3 7 74-83-9 0.00 94.00 Bromomethane 0 1.3 8 Chloroethane 75-00-3 0.00 64.00 ND 75-69-4 0.00 0 ND 1.3 9 Trichlorofluoromethane (11) 101.00 1,1-Dichloroethene 75-35-4 0.00 61.00 0 ND 1.3 10 1,1,2- Cl 1,2.2- F ethane (113) 1 76-13-1 0.00 151.00 0 ND 1.3 11 75-09-2 7.47 26189 ND 12 Methylene Chloride 84.00 1.3 1,1-dichloroethane 75-34-3 0.00 63.00 0 ND 1.3 13 0 ND 1.3 14 Methyl t-butyl ether (MTBE) 1634-04-4 0.00 73.00 cis-1.2-Dichloroethene 156-59-2 0.00 61.00 0 ND 1.3 15 16 Bromochloromethane (SS) 9.71 130.00 362419 45.0 90% 17 Chloroform 67-66-3 10.03 83.00 11463 ND 1.3 18 1,1,1-Trichloroethane 71-55-6 0.00 97.00 0 ND 1.3 107-06-2 19 1.2-Dichloroethane 10.70 62.00 ND 1.3 22386 20 Carbon tetrachloride ND 56-23-5 11.33 117.00 17624 1.3 21 ND Benzene 71-43-2 11.20 78.00 1.3 61573 22 1,4-Diffuorobenzene (SS) 11.78 114.00 1918698 64.3 129% 23 Trichloroethene 79-01-6 12.36 130.00 1.5 1.3 24266 24 ND 1,2-dichloropropane 78-87-5 0.00 1.3 63.00 0 25 cis-1,3-dichloropropene 542-75-6 0.00 ND 75.00 0 1.3 26 Toluene 108-88-3 14.17 91.00 550020 15.4 1.3 27 trans-1,3-dichloropropene 10061-02-6 0.00 75.00 0 ND 1.3 28 1,1,2-Trichloroethane 79-00-5 13.61 97.00 12304 ND 1.3 29 Tetrachloroethene 127-18-4 15.35 164.00 31241 1.4 1.3 30 1,2-Dibromoethane 106-93-4 0.00 ND 107.00 0 1.3 31 Chlorobenzene 108-90-7 0.00 0 ND 1.3 112.00 32 Ethyl benzene 100-41-4 16.67 91.00 139722 1.6 1.3 m,p-Xylene 33 1330-20-7 16.88 91.00 243834 1.8 1.3 34 o-Xylene 95-47-6 17.41 91.00 1.6 1.3 116386 35 Styrene 100-42-5 17.32 ND 104.00 15474 1.3 36 1,1,2,2-Tetrachloroethane 79-34-5 17.49 1.4 83.00 83922 1.3 37 Bromofluorobenzene (SS) 17.95 95.00 797902 50.3 101% 38 1,3,5-Trimethylbenzene 19.27 108-67-8 105.00 ND 15927 1.3 1,2,4-Trimethylbenzene 39 95-63-6 19.82 105.00 23544 ND 1.3 40 1,3-Dichlorobenzerie 541-73-1 19.90 146.00 ND 1.3 13607 41 Benzyl chloride 100-44-7 20.20 91.00 11650 ND 1.3 42 1,4-Dichlorobenzene 106-46-7 20.02 146.00 1.3 17789 ND 43 1.2-Dichlorobenzene 95-50-1 20.50 146,00 14185 ND 1.3 44 1,2,4-Trichlorobenzene 23.50 120-82-1 180.00 11024 ND 1.3 45 Hexachlorobutadiene 87-68-3 0.00 1.3 225.00 0 ND Calibration Data: NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv 615\_10T.D 615\_20I.D 615\_30H.D Date Printed: 9/8/00 9:35 AM Report: TO-15RPT3.XLS

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_lci.

<sup>\*\*</sup>Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets.\*\*



#### INDUSTRIAL HYGIENE

#### ENVIRONMENTAL TESTING

• EPA/NVLAP 101262-0

• AIHA ACCREDITATION NO. 100439

• NY DOH 10903 • PA DER 06-353 • NJ DEP 77879

# **ANALYTICAL REPORT**

Client:

Sevenson Environmental Services, Inc.

Project:

196389

Report to:

Adam Hibbard

Received:

30-AUG-00

Sevenson Environmental Services, Inc.

Reported:

21-SEP-00

51 Eames Street

Willimington MA 01887

Project Description:

Olin Remediation: TO-15

Standard TAT

RESULT

UNITS

CONCENTRATION UNITS

METHOD

#### 93139 North of Debris/Soil Pad

Lab Sample: 1417728 sampled: 25-AUG-00 17:30

See Attached Report

#### 04421 North of Area A

Lab Sample: 1417729 sampled: 25-AUG-00 17:30

See Attached Report

#### 93208 North of Area B

Lab Sample: 1417730 sampled: 25-AUG-00 17:30

See Attached Report

#### 92092 Gate to Bio Pad

Lab Sample: 1417731 sampled: 25-AUG-00 17:30

See Attached Report

#### 9153B NOrth of Debris/Soil Pile

Lab Sample: 1417732 sampled: 26-AUG-00 16:30

See Attached Report



#### INDUSTRIAL HYGIENE

#### **ENVIRONMENTAL TESTING**

• EPA/NVLAP 101262-0

• NY DOH 10903 - AIHA ACCREDITATION NO. 100439 • PA DER 06-353 • NJ DEP 77675

Client:

Sevenson Environmental Services, Inc.

Project:

196389

RESULT

UNITS

CONCENTRATION UNITS

METHOD

03129 North of Area A

Lab Sample: 1417733

sampled: 26-AUG-00 16:30

See Attached Report

9304B North of Area B

Lab Sample: 1417734

sampled: 26-AUG-00 16:30

See Attached Report

11208 Gate to Bio Pad

Lab Sample: 1417735

sampled: 26-AUG-00 16:30

See Attached Report

Final sample concentrations calculated from sample areas supplied on chain of custody.

< Indicates less than the limit of quantitation.

Dil. Fact: 1.8 Philip 196389 Sevenson 8/25/00 N. Area B Autosampler: 5 Sample: 5970MSD1 nafion off; cryotrap -5C;to15\_lci; Misc: Reporting C:\HPCHEM\1\9700\ 1417730.D File: Method: 9700IS Limits IS/Surr. ppbv ppbv R.T. CAS# Q lon Area Recovery Cmpd # Compound 16.06 1587110 50.0 100% Chlorobenzene-d5 (IS) 117.00 1 ND 0.9 75-71-8 2.18 85.00 17138 2 Dichlorodifluoromethane (12) 0.00 0 ND 0.9 74-87-3 52.00 3 Chloromethane ٥ ND 0.9 0.00 4 1,2- CF 1,1,2,2-F ethane (114) 76-14-2 85.00 75-01-4 0.00 62.00 0 ND 0.9 5 Vinyl chloride ٥ ND 0.9 106-99-0 0.00 54.00 6 1,3-Butadiene ND 74-83-9 0.00 94.00 0 0.9 7 Bromomethane ND 0.9 75-00-3 0.00 64.00 0 8 Chloroethane 75-69-4 6.05 20601 ND 0.9 9 Trichlorofluoromethane (11) 101.00 75-35-4 0.00 0 ND 0.9 1,1-Dichloroethene 61.00 10 ND 76-13-1 0.00 0 0.9 1,1,2- Cl 1,2,2- F ethane (113) \* 151.00 11 75-09-2 7.43 84.00 104443 3.2 0.9 12 Methylene Chloride 75-34-3 0.00 0 ND 0.9 1.1-dichloroethane 63.00 13 1634-04-4 9.28 73.00 38954 ND 0.9 14 Methyl t-butyl ether (MTBE) ND 0.9 156-59-2 0.00 0 15 cis-1,2-Dichloroethene 61.00 9.73 371809 44.5 89% Bromochioromethane (SS) 130.00 16 ND 0.9 67-66-3 0.00 0 Chloroform 83.00 17 71-55-6 0.00 0 ND 0.9 1.1.1-Trichloroethane 97.00 18 107-06-2 0.00 62.00 0 ND 0.9 19 1.2-Dichloroethane 56-23-5 0.00 117.00 0 ND 0.9 20 Carbon tetrachloride 1.2 0.9 Benzene 71-43-2 11.20 78.00 97702 21 11.78 114.00 2012787 65.0 130% 22 1,4-Difluorobenzene (SS) 7.7 0.9 Trichloroethene 79-01-6 12.33 130.00 188387 23 ND 78-87-5 0.00 0 0.9 24 1.2-dichloropropane 63.00 0.00 0 ND 0.9 542-75-6 75.00 25 cis-1,3-dichloropropene 108-88-3 14.16 91.00 50.1 0.9 26 Toluene 2679967 1.2 0.9 27 trans-1,3-dichloropropene 10061-02-6 14.16 75.00 22826 0.9 1,1,2-Trichloroethane 79-00-5 0.00 97.00 ND 28 0 ND 0.9 29 Tetrachloroethene 127-18-4 15.37 164.00 10784 30 1.2-Dibromoethane 106-93-4 0.00 107.00 0 ND 0.9 0 ND 0.9 31 Chlorobenzene 108-90-7 0.00 112.00 100-41-4 16.67 130741 1.0 0.9 32 Ethyl benzene 91.00 0.9 33. m,p-Xylene 1330-20-7 16.88 91.00 288762 1.4 95-47-6 ND 0.9 34 o-Xylene 17.41 91.00 75855 35 Styrene 100-42-5 17.32 104.00 19645 ND 0.9 79-34-5 ND 0.9 36 1,1,2,2-Tetrachloroethane 17.53 83.00 18167 37 17.96 95.00 820836 49.9 100% Bromofluorobenzene (SS) 19.29 ND 0.9 38 1,3,5-Trimethylbenzene 108-67-8 105.00 14456 39 1,2,4-Trimethylbenzene 95-63-6 19.82 105.00 26000 ND 0.9 40 19.91 ND 0.9 1,3-Dichlorobenzene 541-73-1 146.00 10110 41 Benzyl chloride 100-44-7 20.47 91.00 17114 ND 0.9 42 0.9 1,4-Dichlorobenzene 106-46-7 20.03 146.00 13659 ND 43 1,2-Dichlorobenzene 95-50-1 20.52 146.00 10541 ND 0.9 44 0.00 ND 0.9 1,2,4-Trichlorobenzene 120-82-1 180.00 0 0.9 45 Hexachlorobutadiene 87-68-3 0.00 225.00 ND NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv Calibration Data: 615\_20I.D 615\_30H.D 615\_10T.D Report: TO-15RPT3.XLS Date Printed: 9/8/00 9:40 AM

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan Nutech; -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_tci.

<sup>\*\*</sup>Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets.\*\*

Sample: Philip 196389 Sevenson 8/25/00 Gate to BioPa Autosampler: 6 Dil. Fact: 2.4 nafion off; cryotrap -5C;to15\_lci; Misc: 5970MSD1 Method: 9700IS File: C:\HPCHEM\1\9700\ 1417731.D Reporting Limits IS/Surr. CAS# R.T. Recovery Compound ppbv Cmpd # Q lon Area ppbv Chlorobenzene-d5 (IS) 16.07 1584943 1 117.00 50.0 100% 2 Dichlorodifluoromethane (12) 75-71-8 2.17 85.00 13158 ND 1.2 3 Chloromethane 74-87-3 0.00 52.00 0 ND 1.2 4 1,2- Cl- 1,1,2,2-F ethane (114) 76-14-2 0.00 85.00 0 ND 1.2 5 Vinyl chloride 75-01-4 0.00 0 62,00 ND 1.2 6 1.3-Butadiene 106-99-0 0.00 54.00 0 ND 1.2 7 Bromomethane 74-83-9 0.00 94.00 0 ND 1.2 8 Chloroethane 75-00-3 0.00 64.00 0 ND 1.2 9 Trichlorofluoromethane (11) 75-69-4 0.00 101.00 0 ND 1.2 10 1.1-Dichloroethene 75-35-4 0.00 61.00 0 ND 1.2 11 1,1,2- Cl 1,2,2- F ethane (113) 76-13-1 0.00 151.00 0 ND 1.2 Methylene Chloride 12 75-09-2 7.43 84.00 54916 2.3 1.2 13 1,1-dichloroethane 75-34-3 0.00 ND 63.00 0 1.2 Methyl t-butyl ether (MTBE) 14 1634-04-4 0.00 73.00 0 ND 1.2 15 cis-1,2-Dichloroethene 156-59-2 0.00 61.00 ND 1.2 0 Bromochloromethane (SS) 16 9.71 130.00 398792 47.8 96% 17 Chloroform 67-66-3 0.00 83,00 0 ND 1.2 18 1,1,1-Trichloroethane 71-55-6 0.00 97.00 0 ND 1.2 19 1,2-Dichloroethane 107-06-2 0.00 ND 62.00 0 1.2 20 Carbon tetrachloride 56-23-5 0.00 0 ND 117.00 1.2 21 Benzene 71-43-2 11.23 78.00 25827 ND 1.2 1.4-Difluorobenzene (SS) 22 11.79 114.00 2017705 65.2 130% 23 Trichloroethene 79-01-6 0.00 130.00 ND 1.2 0 24 1,2-dichloropropane 78-87-5 0.00 63.00 ND 0 1.2 25 cis-1,3-dichloropropene 542-75-6 0.00 75.00 0 ND 1.2 26 Toluene 108-88-3 14.17 91.00 566049 1.2 14.1 27 trans-1,3-dichloropropene 10061-02-6 0.00 75.00 0 ND 1.2 1,1,2-Trichloroethane 28 79-00-5 0.00 97.00 0 ND 1.2 29 Tetrachloroethene 127-18-4 0.00 164.00 0 ND 1,2 30 1,2-Dibromoethane 106-93-4 0.00 107.00 0 ND 1.2 31 Chlorobenzene 108-90-7 0.00 112.00 0 ND 1.2 32 Ethyl benzene 100-41-4 16.69 91.00 29454 ND 1.2 33 m,p-Xylene 1330-20-7 16.89 91,00 69232 ND 1.2 34 o-Xylene 95-47-6 17.42 91.00 21597 ND 1.2 35 Styrene 100-42-5 0.00 104.00 0 ND 1.2 36 1,1,2,2-Tetrachioroethane 79-34-5 0.00 83.00 0 ND 1.2 37 Bromofluorobenzene (SS) 17.97 95.00 49.7 816785 99% 38 1,3,5-Trimethylbenzene 108-67-8 19.30 105.00 10445 ND 1.2 39 1,2,4-Trimethylbenzene 95-63**-6** 19.83 105.00 16036 ND 1.2 40 1,3-Dichlorobenzene 541-73-1 0.00 146.00 ND 1.2 0 41 Benzyl chloride 100-44-7 20.48 91.00 13907 1.2 ND 42 1,4-Dichlorobenzene 106-46-7 0.00 146.00 ٥ ND 1.2 43 1,2-Dichlorobenzene 95-50-1 0.00 146.00 0 ND 1.2 44 1,2,4-Trichlorobenzene 120-82-1 0.00 180.00 0 ND 1.2 45 Hexachlorobutadiene 87-68-3 0.00 225.00 1.2 Calibration Data: NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv 615\_10T.D 615\_201.D 615\_30H.D Date Printed: 9/8/00 9:45 AM Report: TO-15RPT3.XLS

ND = Not Detected at the Reporting Limits. SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Sample: Misc:	Philip 196389 Sevenson 8/26/00 nation off; cryotrap -5C;to15_lci			A	utosampler:		Dil. Fact:	5970MS
	· · · · · · · · · · · · · · · · · · ·		CHEM\1\9	700\	1417732.D		Reporting	
alediod.					1-111		Limits	IS/Su
Cmpd #	Compound	CAS#	R.T.	Q ion	Area	ppbv	ppbv	Recov
1	Chlorobenzene-d5 (IS)		16.07	****	1470813	50.0		100%
2	Dichlorodifluoromethane (12)	75-71-8	2.18		11486	ND	1.6	
3	Chloromethane	74-87-3	0.00		0	ND	1.6	
4	1,2- Cl- 1,1,2,2-F ethane (114)	76-14-2	0.00		0	ND	1.6	
5	Vinyl chloride	75-01-4	0.00		. 0	ND	1.6	
6	1,3-Butadiene	106-99-0	0.00	54.00	0	ND	1.6	
7	Bromomethane	74-83-9	0.00	94.00	0	ND	1.6	
8	Chloroethane	75-00-3	0.00	64.00	0	ND	1.6	
9	Trichlorofluoromethane (11)	75-69-4	6.08	101.00	16281	, ND	1.6	
10	1,1-Dichloroethene	75-35-4	0.00	61.00	0	ND	1.6	
11	1,1,2- Cl 1,2,2- F ethane (113)	76-13-1	0.00	151.00	0	ND	1.6	
12	Methylene Chloride	75-09-2	7.42	84.00	92093	5.3	1.6	
13	1,1-dichloroethane	75-34-3	0.00	63.00	0	ND	1.6	
14	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00	0	ND	1.6	
15	cis-1,2-Dichloroethene	156-59-2	0.00	61.00	0	ND	1.6	
16	Bromochloromethane (SS)		9.71	130.00	387072	50.0		100%
17	Chloroform	67-66-3	0.00	83.00	0	ND	1.6	
18	1,1,1-Trichloroethane	71-55-6	0.00	97.00	0	ND	1.6	
19	1,2-Dichloroethane	107-06-2	0.00	62.00	0	ND	1.6	
20	Carbon tetrachloride	56-23-5	0.00	117.00	. 0	ND	1.6	
21	Вепхеле	71-43-2	11.21	78.00	37179	ND	1.6	
22	1,4-Difluorobenzene (SS)		11.80	114.00	1797141	62.6		125%
23	Trichloroethene	79-01-6	0.00	130.00	۵	ND	1.6	,,,
24	1,2-dichloropropane	78-87-5	0.00	63.00	0	ND	1.6	
25	cis-1,3-dichloropropene	542-75-6	0.00	75.00	0	ND	1.6	
26	Toluene	108-88-3	14.16	91.00	1316730	45.7	1.6	
	trans-1,3-dichloropropene	10061-02-6	14.16	75.00	10591	ND	1.6	
28	1,1,2-Trichloroethane	79-00-5	13.56	97.00	80489	7.4	1.6	
	Tetrachloroethene	127-18-4	15.35	164.00	16760	ND	1.6	
	1,2-Dibromoethane	106-93-4	0.00	107.00	0	ND	1.6	
	Chlorobenzene	108-90-7	16.16	112.00	16539	ND	1.6	
	Ethyl benzene	100-41-4	16.67	91.00	87880	ND	1.6	
	m,p-Xylene	1330-20-7	16.88	91.00	176266	1.6	1.6	
	o-Xylene	95-47-6	17.43	91.00	40957	ND	1.6	
	Styrene	100-42-5	17.32	104.00	17467	ND	1.6	
	1,1,2,2-Tetrachloroethane	79-34-5	0.00	83.00	0	ND	1,6	
	Bromofluorobenzene (SS)		17.96	95.00	736302	48.3	.,,	97%
	1,3,5-Trimethylbenzene	108-67-8	19.29	105.00	19494	ND	1.6	U1 70
	1,2,4-Trimethylbenzene	95-63-6	19.82	105.00	63913	ND	1.6	
	1,3-Dichlorobenzene	541-73-1	0.00	146.00	0	ND	1.6	
	Benzyl chloride	100-44-7	0.00	91.00	0	ND	1.6	
	1,4-Dichlorobenzene	106-46-7	0.00	146.00	. 0	ND	1.6	
	1,2-Dichlorobenzene	95-50-1	0.00	146.00	0	ND.	1.6	
	1,2,4-Trichlorobenzene	120-82-1	0.00	180.00	0	ND	1.6	
	Hexachlorobutadiene	87-68-3	0.00	225.00	0	ND	1.6	
		ceable Standard						· · · · · · · · · · · · · · · · · · ·
`	615_10T.D	615_20I.D				5_30H.D		
	<del>-</del>	0 9:49 AM	Danner T	O-15RPT				

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard: IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_lci.

<sup>&</sup>quot;"Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Autosampler: 8 Dil. Fact: 1.8 Sample: Philip 196389 Sevenson 8/26/00 N. Area A 5970MSD1 nation off; cryotrap -5C;to15\_lci; Misc: C:\HPCHEM\1\9700\ Reporting Method: 9700IS File: 1417733.D Limits IS/Surr. ppbv CAS# R.T. Qion Area ppbv Recovery Cmpd # Compound 16.06 117.00 1535255 50.0 100% 1 Chlorobenzene-d5 (IS) 75-71-8 2.15 85.00 18352 ND 0.9 2 Dichlorodifluoromethane (12) 74-87-3 0.00 52.00 0 ND 0.9 3 Chloromethane 0,00 0 0.9 76-14-2 85.00 ND 4 1,2- Cl- 1,1,2,2-F ethane (114) 5 75-01-4 0.00 62.00 0 ND 0.9 Vinyl chloride 106-99-0 0.00 54.00 0 ND 0.9 6 1,3-Butadiene 7 0.00 0 ND 74-83-9 94.00 0.9 Bromomethane 8 Chloroethane 75-00-3 0.00 64.00 0 ND 0.9 Trichlorofluoromethane (11) 75-69-4 6.03 101.00 25285 ND 0.9 9 1,1-Dichloroethene 75-35-4 0.00 61.00 ND 0.9 10 0 0.00 1,1,2- Cl 1,2,2- F ethane (113) 76-13-1 151.00 0 ND 0.9 11 75-09-2 7.43 11.3 0.9 12 Methylene Chloride 84.00 356266 13 1.1-dichloroethane 75-34-3 0.00 ND 0.9 63.00 0 1634-04-4 9.06 ND 0.9 14 Methyl t-butyl ether (MTBE) 73.00 10765 156-59-2 ND 15 cis-1,2-Dichloroethene 0.00 61.00 0 0.9 16 Bromochloromethane (SS) 9.73 130.00 381053 47.1 94% 67-66-3 0.00 17 Chloroform 83.00 0 ND 0.9 0.00 18 1.1.1-Trichloroethane 71-55-6 97.00 0 ND 0.9 107-06-2 0.00 0 ND 0.9 19 1,2-Dichloroethane 62.00 20 0.9 Carbon tetrachloride 56-23-5 0.00 117.00 0 ND 71-43-2 3.2 0.9 21 Benzene 11.18 78.00 240831 22 1,4-Difluorobenzene (SS) 11.80 114.00 1682509 56.1 112% 23 12.35 Trichloroethene 79-01-6 130.00 10311 0.9 ND 24 0.00 1,2-dichloropropane 78-87-5 63.00 0 ND 0.9 25 cis-1,3-dichloropropene 542-75-6 0.00 75.00 0 ND 0.9 26 Toluene 108-88-3 14.18 91.00 6838258 132.1 0.9 27 trans-1,3-dichloropropene 10061-02-6 14.18 75.00 3.5 0.9 64956 28 1.1.2-Trichioroethane 79-00-5 13,56 97.00 93422 4.7 0.9 29 Tetrachloroethene 127-18-4 15.34 164.00 66678 2.1 0.9 30 1,2-Dibromoethane 106-93-4 0.00 0.9 107.00 ND 0 31 Chlorobenzene 108-90-7 16.01 112.00 26269 ND 0.9 32 Ethyl benzene 100-41-4 16.64 91.00 582677 4.5 0.9 33 m.p-Xylene 1330-20-7 16.87 91.00 5.7 0.9 1126527 34 o-Xylene 95-47-6 17.40 91.00 229277 2.2 0.9 35 Styrene 100-42-5 17.31 104.00 163499 2.2 0.9 36 1,1,2,2-Tetrachioroethane 79-34-5 17.57 83.00 ND 0.9 26866 37 Bramafluorobenzene (SS) 17.96 95.00 801440 50.3 101% 38 1,3,5-Trimethylberizene 108-67-8 19.28 105.00 ND 0.9 36062 39 1,2,4-Trimethylbenzene 95-63-6 19.81 105.00 99578 ND 0.9 40 1,3-Dichlorobenzene 541-73-1 0.00 146.00 ND 0.9 0 41 Benzyl chloride 100-44-7 19.81 91.00 14030 ND 0.9 42 1,4-Dichlorobenzene 106-46-7 0.00 146.00 ND 0.9 0 43 1,2-Dichlorobenzene 95-50-1 0.00 146.00 0 ND 0.9 44 1.2.4-Trichlorobenzene 120-82-1 0.9 0.00 180.00 0 ND 45 Hexachlorobutadiene 87-68-3 0.00 225.00 Calibration Data: NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv 615\_10T.D 615\_20I.D 615\_30H.D Date Printed:

ND = Not Detected at the Reporting Limits.

9/8/00 9:54 AM Report: TO-15RPT3.XLS

its. SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_lci.

""Note that 1 Thutadians and MTRF are TO 15 compounds only and set TO 14 targets "

Sample	: Philip 196389 Sevenson 8/26/00	N. Area B		A	utosampler: 9		Dil. Fact:	1.7
Misc:	nafion off; cryotrap -5C;to15_lci;					•		5970MSD
	<del></del>		CHEM\1\9	700\	1417734B.D		Reporting	
111011100					•		Limits	IS/Surr
Cmpd i	Compound	CAS#	R.T.	Q ion	Area	ppbv	ppbv	Recover
1	Chiorobenzene-d5 (IS)	<u></u>	16.06	117.00	1274115	50.0		100%
2	Dichlorodifluoromethane (12)	75-71-8	2.18		13809	ND	0.9	
3	Chloromethane	74-87-3	0.00		0	ND	0.9	
4	1,2- Cl- 1,1,2,2-F ethane (114)	76-14-2	0.00		0	ND	0.9	
5	Vinyl chloride	75-01-4	0.00		0	ND	0.9	
6	1,3-Butadiene	106-99-0	0.00	54.00	0	. ND	0.9	
7	Bromomethane	74-83-9	0.00	94.00	0	ND	0.9	
8	Chloroethane	75-00-3	4.71	64.00	10599	1.0	0.9	
9	Trichlorofluoromethane (11)	75-69-4	6.05	101.00	32691	1.0	0.9	
10	1,1-Dichloroethene	75-35-4	0.00	61.00	0	ND	0.9	
11	1,1,2- Cl 1,2,2- F ethane (113)	76-13-1	0.00	151.00	0	ND	0.9	
12	Methylene Chloride	75-09-2	7.33	84.00	1173008	42.4	0.9	
13	1,1-dichloroethane	75-34-3	0.00	63.00	0	ND	0.9	
14	Methyl t-butyl ether (MTBE)	1634-04-4	9.08	73.00	28466	- ND	0.9	
15	cis-1,2-Dichloroethene	156-59-2	0.00	61.00	0	ND	0.9	
16	Bromochloromethane (SS)	100-00-2	9.71	130.00	306362	45.7	<b>U.</b>	91%
17	Chioroform	67-66-3	10.02	83.00	10711	ND	0.9	3170
18	1,1,1-Trichloroethane	71-55-6	0.00	97.00	0	ND	0.9	
19	1,2-Dichloroethane	107-06-2	10.69	62.00	12714	ND	0.9	
20	Carbon tetrachloride	56-23-5	0.00	117.00	0	ND	0.9	
21		71-43-2	11.13	78.00	928456	13.8	0.9	
	Benzene	/ 1-45-2	11.78	114.00	1611308	64.8	0.3	130%
22	1,4-Difluoroberizene (SS)	79-01-6	12.35	130.00		ND	0.9	13076
23	Trichloroethene		0.00		15823	ND	0.9	
24	1,2-dichloropropane	78-87-5	0.00	63.00	O O	ND ND	0.9	
25 26	cis-1,3-dichloropropene	542-75-6 108-88-3	14.18	75.00	8669978	190.6	0.9	
26 27	Toluene trans-1,3-dichloropropene	10061-02-6	14.18	91.00	85535	5.2	0.9	
27 28	1,1,2-Trichloroethane	79-00-5	14.37	75.00 97. <b>00</b>	11342	ND	- 0. <del>9</del>	
∠o 29	Tetrachloroethene	127-18-4	15.36	164.00	10860	ND	0.9	
30	1,2-Dibromoethane	106-93-4	0.00	107.00	0	ND	0.9	
30 31	Chlorobenzene	108-90-7	0.00	112.00	0	ND	0.9	
		100-50-7	16.66		121253	1.1	0. <del>9</del> 0.9	
32	Ethyl benzene	1330-20-7	16.88	91.00		1.3	0.9	
33	m,p-Xylene	95-47-6	17.41	91.00	232977	ND	0.9	
34	o-Xylene			91.00	41856			
	Styrene	100-42-5	0.00	104.00	0	ND	0.9	
36	1,1,2,2-Tetrachloroethane	79-34-5	0.00	83.00	0	ND	0.9	
37	Bromofluorobenzene (SS)		17.96	95.00	657776	49.8		100%
	1,3,5-Trimethylbenzene	108-67-8	19.28	105.00	10298	ND	0.9	
	1,2,4-Trimethylbenzene	95-63-6	19.82	105.00	26691	ND	0.9	
	1,3-Dichlorobenzene	541-73-1	0.00	146.00	0	ND	0.9	
	Benzyl chloride	100-44-7	20.46	91.00	90304	3.1	0.9	
	1,4-Dichlorobenzene	106–46-7	0.00	146.00	0	ND	0.9	
	1,2-Dichlorobenzene	95-50-1	0.00	146.00	Q -	ND	0.9	
	1,2,4-Trichlorobenzene	120-82-1	0.00	180.00	0	ND	0.9	
****	Hexachlorobutadiene Calibration Data: NIST Tra	87-68-3 ceable Standard	0.00	225.00	0	ND	0.9	

Date Printed:

615\_10T.D

615\_201.D

9/8/00 3:23 PM

615\_30H.D

ND = Not Detected at the Reporting Limits.

Report: TO-15RPT3.XLS

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

<sup>\*\*</sup>Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets.\*\*

Sample: Philip 196389 Sevenson 8/26/00 Gate to BioPa Autosampler: 10 Dil. Fact: 2,2 5970MSD1 nation off; cryotrap -5C;to15\_lci; Misc: Reporting Method: 9700IS C:\HPCHEM\1\9700\ 1417735.D IS/Surr. Limits CAS# ppbv ppbv Recovery R.T. Area Cmpd# Compound Qion 16.08 1642658 100% Chlorobenzene-d5 (IS) 117.00 50.0 1 14277 ND 1.1 75-71-8 2.08 85.00 Dichlorodifluoromethane (12) 2 ND 3 Chloromethane 74-87-3 0.00 52.00 0 1.1 0.00 0 ND 1.1 76-14-2 85.00 1,2- CI- 1,1,2,2-F ethane (114) 4 0.00 0 ND 1.1 75-01-4 5 Vinyl chloride 62.00 106-99-0 0.00 0 ND 1.1 54.00 6 1.3-Butadiene Bromomethane 0.00 ND 7 74-83-9 94.00 ٥ 1.1 75-00-3 0.00 64.00 0 ND 1.1 8 -Chloroethane 75-69-4 6.03 101.00 14587 ND 1.1 Trichlorofluoromethane (11) 9 1.1-Dichloroethene 75-35-4 0.00 61.00 0 ND 1.1 10 76-13-1 0.00 ND 1.1 1,1,2- Cl 1,2,2- F ethane (113) 151.00 0 11 75-09-2 7.42 4.6 1.1 12 Methylene Chloride 84.00 126032 0.00 ND 1.1 75-34-3 0 1,1-dichloroethane 63.00 13 14 Methyl t-butyl ether (MTBE) 1634-04-4 9.35 73.00 23508 ND 1.1 ND 156-59-2 0.00 1.1 15 cis-1,2-Dichloroethene 61.00 9.74 37.2 74% 16 Bromochioromethane (SS) 130.00 321864 67-66-3 0.00 ND 1.1 17 Chloroform 83.00 0 1,1,1-Trichloroethane 71-55-6 0.00 97.00 0 ND 1.1 18 0.00 1,2-Dichloroethane 107-06-2 0 ND 1.1 19 62,00 Carbon tetrachloride 56-23-5 0.00 0 ND 1.1 20 117.00 21 71-43-2 11.22 2.0 1.1 Benzene 78.00 134962 11.80 22 1,4-Difluorobenzene (SS) 2019174 63.0 114.00 126% 0.00 23 Trichloroethene 79-01-6 130.00 0 ND 1.1 24 1,2-dichloropropane 78-87-5 0.00 63.00 0 ND 1.1 542-75-6 0.00 25 cis-1,3-dichloropropene 75.00 0 ND 1.1 26 108-88-3 14.16 91.00 4014506 88.6 1.1 27 trans-1,3-dichloropropene 10061-02-6 14.16 75.00 34878 2.1 1.1 28 1,1,2-Trichloroethane 1.1 79-00-5 13.58 11630 ND 97.00 29 Tetrachloroethene 127-18-4 0.00 ND 1.1 164.00 0 30 1,2-Dibromoethane 106-93-4 0.00 107,00 0 ND 1.1 31 Chiorobenzene 108-90-7 0.00 112.00 0 ND 1.1 32 Ethyl benzene 100-41-4 16.68 91.00 112195 ND 1.1 33 m,p-Xylene 1330-20-7 16.88 91.00 231732 1.3 1.1 34 o-Xylene 95-47-6 17.43 91.00 48960 ND 1.1 35 Styrene 100-42-5 17.33 104.00 18538 ND 1.1 36 79-34-5 1,1,2,2-Tetrachloroethane 0.00 83.00 0 ND 1.1 37 Bromofluorobenzene (SS) 17.96 95.00 51.9 883745 104% 38 1,3,5-Trimethylbenzene 108-67-8 19.29 105.00 13048 ND 1.1 39 1,2,4-Trimethylbenzene 95-63-6 19.82 105.00 29375 ND 1.1 40 1,3-Dichlorobenzene 541-73-1 0.00 146.00 ND 1.1 0 41 Benzyl chloride 100-44-7 20.47 91.00 14799 ND 1.1 42 1,4-Dichlorobenzene 106-46-7 0.00 ND 1.1 146.00 0 43 1,2-Dichlorobenzene 95-50-1 0.00 146.00 0 ND 1.1 44 1,2,4-Trichlorobenzene 120-82-1 ND 0.00 180.00 Ö 1.1 45 Hexachlorobutadiene 87-68-3 0.00 ND 1.1 225.00 Calibration Data: NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv 615\_10T.D 615\_20I.D 615\_30H.D

Date Printed: ND = Not Detected at the Reporting Limits.

Report: TO-15RPT3.XLS SS = Surrogale Standard; IS = Internal Standard 50 ng each

Col:SP8-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

9/8/00 10:00 AM

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

8100 Brownleigh Drive, Suite 120 Raleigh, NC 27617



919 510-0228 Telephone

919 510-0141 Fax

Web Site: www.rtp-labs.com

# TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin

Project No: 196389

Sample Date: 8/25/2000

Matrix: Air in Summa Canister

Analysis Date: 9/7/2000

Date Received: 8/30/2000

Sample ID:

1417728 canister 93139 "North of Debis/Soil Pad 8/25/00"

Estimated ppbv\* Compound 5 Hexane

\*Estimated values were calculated against the  $d_s$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

Client: Philip Environmental Services

Contact: Jim Jacklin

Project No: 196389

Sample Date: 8/25/2000

Matrix: Air in Summa Canister

Analysis Date: 9/7/2000

Date Received: 8/30/2000

Sample ID:

1417729 canister 04421 "North of Area A 8/25/00"

Compound	Estimated ppbv*			
2-ethvi hexanal	11			
2.2.6-trimethyl octane	10			
2.2,7,7-tetramethyl octane	7			
1-methyl-1-(1-methylethyl) 1,3-cyclohexadie	ene 145	•		
1-methyl-1-(1-methylethyl) benzene	16			
2,2,7-trimethyl decane	13			
1-methyl-4-(1-methylethyl) 1,4-cyclohexadio	ene 31			•
• ,				
			<u> </u>	

Sample ID:

1417730 canister 93208"North of Area B 8/25/00"

Compound	Estimated ppbv*	
Acetic acid, methyl ester	9	
Hexane	29	
Methyl cyclopentane	12	

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Web Site: www.rtp-labs.com

### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin

Project No: 196389

Sample Date: 8/25/2000

Matrix: Air in Summa Canister

Analysis Date: 9/7/2000

Date Received: 8/30/2000

Sample ID:

1417731 canister 92092 "Gate to Biopad 8/25/00"

Compound

Estimated ppbv\*

2,2,4-trimethyl pentane

11

File: 196389.doc/als

<sup>\*</sup>Estimated values were calculated against the  $d_5$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

8100 Brownleigh Drive, Suite 120 Raleigh, NC 27617



919 510-0228 Telephone 919 510-0141 Fax

Web Site: www.rtp-labs.com

# TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin

Project No: 196389

Sample Date: 8/26/2000

Matrix: Air in Summa Canister

Analysis Date: 9/7/2000

Date Received: 8/30/2000

Sample ID:

1417732 canister 9153B"North of Debris/Soil Pad 8/26/00"

Compound	Estimated ppbv*	
Hexane	14	
2,2,4-trimethyl hexane	112	
2,4,4-trimethyl-1-pentene	13	
Octane	17	

<sup>\*</sup>Estimated values were calculated against the  $d_5$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

Sample ID:

1417733 canister 03129 "North of Area A 8/26/00"

Compound	Estimated ppbv*	
Hexane	43	
2,2,4-trimethyl hexane	87	
2,4,4-trimethyl-1-pentene	29	
Octane	35	

File: 196389.doc/als

8100 Brownleigh Drive, Suite 120 Ralcigh, NC 27617



919 510-0228 Telephone

919510-0141 Fax

Web Site: www.rtp-labs.com

### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin

Project No: 196389

Sample Date: 8/26/2000

Matrix: Air in Summa Canister

Analysis Date: 9/7/2000

Date Received: 8/30/2000

Sample ID:

1417734 canister 9304B"North of Area B 8/26/00"

Compound	Estimated ppbv*	
Нехале	120	
Methyl cylcopentane	29	
2,2,4-trimethyl pentane	54	
2,4,4-trimethyl-1-pentene	16	
Methyl cyclohexane	11	
wichigh cycloticatile		

<sup>\*</sup>Estimated values were calculated against the  $d_5$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

Sample ID:

1417735 canister 11208"Gate to Biopad 8/26/00"

Compound	Estimated ppbv*	
Hexane	22	
2,2,4-trimethyl hexane	21	

<sup>\*</sup>Estimated values were calculated against the  $d_s$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

File: 196389.doc/als

# R arch Triangle Park Laboratories, Inc. 8100 Brownleigh Drive, Suite 120

Raleigh, North Carollna 27617 (new zipcode) Phone: 919-510-0228 Fax: 919-510-0141

Web Site: www.rtp-labs.com

# Cham of Custody Record

ISO 17025 Compliant for Testing Labs



Sevension Environment	۸	Pı	roject Manager		e Nun		6 78	1978		x Num 58-		Date: 8/28/0	10
Address 40 Dlin @ 51 Exa	125_5/							ested A			1	Pageof	
Contract/Purchase Order No.: Project	MA Name:		ZIp Code O1887	Preservatives	of Containers	S -				**************************************	\$	RTP Labs Proj. Tracking GC/MS-212-00  # 196389	
Sample ID No. and Description	Date	Time	Matrix _Alr, Llq, Solid	Pres	<b>j</b> o #±	71	Ī					Comments	Fraction #
93139 North of Debrufalland 04421 North of Area A 93208 Nirth of Area B 92092 Carte to Bo Pal 91538 North of Debrus/Sulpa 03129 North of Area A 93048 North of Area B 11208 Carte to Bo Pad	8-25-00	1730							4.1 	7 7 7	ŀ	To not  Analize other  Canisters  Clean and  Reducinge  Only 1	
								] Full [					
Turn Around Time Raquested for Report: Busines  1 day*(4x) 2 days*(3x) 3 days*(2x)		10 day	/s'(1.1x) 15 da		Ele	ctroni	Delly	run [				Possible Hazards/ Known Concent	
Relinquished By:		Date:		30		Shi	pp	25		4		Date: Tir	
VIA Fed PXpress Air hi	11 # 8	225	<del>IIII</del> 206741	e: <u> </u>	Re	celved	By:	ele	ca.	Es		Date: The S-30-00 10	me: 0. ZO



#### INDUSTRIAL HYGIENE

#### ENVIRONMENTAL TESTING

• EPA/NVLAP 101262-0 AIHA ACCREDITATION NO. 100439 NY DOH 10903 • PA DER 06-353 • NJ DEP 77678

## ANALYTICAL REPORT

Client:

Sevenson Environmental Services, Inc.

Project:

196471

Report to:

Received: Reported: 01-SEP-00 22-SEP-00

Adam Hibbard

Sevenson Environmental Services, Inc.

51 Eames Street

Willimington MA 01887

Project Description:

Olin Remediation

TO-15 on Summas

RESULT

UNITS

CDNCENTRATION UNITS

METHOD

12461

Lab Sample: 1418085

sampled: 28-AUG-00 17:00

See Attached Report

<u>A22</u>0

Lab Sample: 1418086

sampled: 28-AUG-00 17:00

See Attached Report

93277

Lab Sample: 1418087

sampled: 28-AUG-00 17:00

See Attached Report

2424

Lab Sample: 1418088

sampled: 28-AUG-00 17:00

See Attached Report

3300

Lab Sample: 1418089

sampled: 30-AUG-00 17:15

See Attached Report



#### INDUSTRIAL HYGIENE

#### ENVIRONMENTAL TESTING

- EPA/NVLAP 101262-0

• NY DOH 10903 AIHA ACCREDITATION NO. 100439 • PA DER 06-353 • NJ DEP 77678

Client:

Sevenson Environmental Services, Inc.

Project:

196471

RESULT

UNITS

CONCENTRATION UNITS

**METHOD** 

818B

Lab Sample: 1418090

sampled: 30-AUG-00 17:15

See Attached Report

93141

Lab Sample: 1418091

sampled: 30-AUG-00 17:15

See Attached Report

2898

Lab Sample: 1418092

sampled: 30-AUG-00 17:15

See Attached Report

Final sample concentrations calculated from sample areas supplied on chain of custody.

< Indicates less than the limit of quantitation.

Sample: Philip 196471 Sevenson 8/28/00 can 12461 Autosampler: 11 Dil. Fact: 2.3 N. Demis/Scillbul ADV (07-04-01) nafion off; cryotrap -5C;to15\_lci; 5970MSD1 Misc: Method: 9700IS C:\HPCHEM\1\9700\ File: 1418085.D Reporting Limits IS/Surr. CAS# ppbv R.T. Qion ppbv Area Recovery Cmpd # Compound 16.08 50.0 100% 117.00 1598520 Chlorobenzene-d5 (IS) 1 ND 75-71-8 85.00 12662 1.2 Dichlorodifluoromethane (12) 2.11 2 ND 1.2 74-87-3 0.00 Chloromethane 52.00 0 3 0.00 0 ND 1.2 76-14-2 85.00 4 1,2- CI- 1,1,2,2-F ethane (114) 75-01-4 0.00 62.00 0 ND 1.2 Vinyl chloride 5 106-99-0 0.00 54.00 0 ND 1.3-Butadiene 1.2 6 7 Bromomethane 74-83-9 0.00 94.00 0 ND 1.2 75-00-3 0.00 0 ND 8 Chloroethane 64.00 1.2 6.03 9 Trichlorofluoromethane (11) 75-69-4 101.00 13697 ND 1.2 0.00 75-35-4 1.1-Dichloroethene 61.00 ND 1.2 10 0 1,1,2- Cl 1,2,2- F ethane (113) 76-13-1 0.00 ND 11 151.00 0 1.2 Methylene Chloride 75-09-2 7.42 212959 8.3 1.2 84,00 12 0.00 1,1-dichloroethane 75-34-3 ND 1.2 13 63.00 0 1634-04-4 9.32 ND 14 Methyl t-butyl ether (MTBE) 73.00 32243 1.2 9.57 15 cis-1,2-Dichloroethene 156-59-2 61.00 11555 ND 1.2 Bromochioromethane (SS) 9.74 41.4 130.00 348721 16 83% 17 Chloroform 67-66-3 0.00 83.00 0 ND 1.2 1,1,1-Trichloroethane 71-55-6 0.00 0 1.2 18 97.00 ND 0.00 19 1,2-Dichloroethane 107-06-2 62.00 0 ND 1.2 Carbon tetrachloride 56-23-5 0.00 117.00 1.2 20 0 ND 21 Benzene 71-43-2 11.20 78.00 231234 3.7 1.2 22 1,4-Difluorobenzene (SS) 11.80 62.6 114.00 1953712 125% 23 Trichloroethene 79-01-6 12.36 130.00 12078 ND 1.2 24 1,2-dichloropropane 78-87-5 0.00 63.00 0 ND 1.2 25 cis-1,3-dichloropropene 542-75-6 0.00 75.00 0 ND 1.2 26 108-88-3 14.18 135.1 1.2 91.00 5700256 27 trans-1,3-dichloropropene 10061-02-6 14.18 1.2 75.00 53581 3.5 28 1,1,2-Trichloroethane 79-00-5 0.00 97.00 ND 1.2 0 29 Telrachloroethene 127-18-4 15.36 164.00 13048 ND 1.2 30 1.2-Dibromoethane 106-93-4 0.00 107.00 ND 1.2 0 31 Chlorobenzene 108-90-7 16.16 112.00 ND 1.2 16095 32 Ethyl benzene 100-41-4 16.66 91.00 225833 2.1 1.2 33 m.p-Xylene 1330-20-7 16.87 91.00 471076 2.9 1.2 34 o-Xylene 95-47-6 17.41 91.00 131773 1.6 1.2 35 Styrene 100-42-5 17.31 104.00 68384 ND 1.2 36 1.1.2.2-Tetrachioroethane 79-34-5 0.00 83.00 0 ND 1.2 37 Bromofluorobenzene (SS) 17.96 95.00 53.5 886848 107% 38 1,3,5-Trimethylbenzene 108-67-8 19.28 105.00 ND 1.2 43570 39 1,2,4-Trimethylbenzene 95-63-6 19.81 105.00 127479 1.3 1.2 40 1.3-Dichlorobenzene 541-73-1 20.02 146.00 31527 ND 1.2 41 Benzyl chloride 100-44-7 19.95 91.00 3.6 97467 1.2 42 1.4-Dichlorobenzene 106-46-7 20.02 146.00 ND 1.2 31527 43 1,2-Dichlorobenzene 95-50-1 0.00 146.00 0 ND 1.2 44 1,2,4-Trichlorobenzene 120-82-1 0.00 1.2 180.00 0 ND 45 Hexachlorobutadiene 1.2 87-68-3 0.00 ND 225.00 Calibration Data: NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv 615\_10T.D 615\_20I.D 615\_30H.D Date Printed: 9/8/00 10:07 AM Report: TO-15RPT3.XLS

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_lci.

<sup>\*\*</sup>Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets.\*\*

Trumbian trestantings.

DII. Fact: 1.9 Sample: Philip 196471 Sevenson 8/28/00 can A220 Autosampler: 12 nation off; cryotrap -5C;to15\_lci; Sw. AMAA ADU (07-06-01) 5970MSD1 Misc: C:\HPCHEM\1\9700\ 1418086.D Reporting Method: 9700IS File: Limits IS/Surr. ppbv CAS# R.T. Q ion Area ppbv Recovery Compound Cmpd # 50.0 100% Chlorobenzene-d5 (IS) 16.08 117.00 1447459 1 75-71-8 2.11 85.00 14049 ND 1.0 2 Dichlorodifluoromethane (12) 74-87-3 0.00 52.00 0 ND 1.0 Chloromethane 3 0.00 0 1.0 1,2- Cl- 1,1,2,2-F ethane (114) 76-14-2 85.00 ND 4 75-01-4 0.00 0 ND 1.0 5 Vinyl chloride 62.00 0.00 0 ND 1.0 106-99-0 54.00 1.3-Butadiene 6 74-83-9 0.00 94.00 0 ND 1.0 7 Bromomethane 75-00-3 0.00 64.00 0 ND 1.0 Chloroethane 8 75-69-4 6.05 101.00 15543 ND 1.0 Trichlorofluoromethane (11) 9 1,1-Dichloroethene 0.00 ND 1.0 10 75-35-4 61,00 1.0 0.00 ND 1,1,2- CI 1,2,2- F ethane (113) 76-13-1 151.00 0 11 2.6 1.0 12 Methylene Chloride 75-09-2 7.42 84.00 72120 75-34-3 0.00 ND 1.0 63.00 0 13 1,1-dichloroethane ND 1.0 Methyl t-butyl ether (MTBE) 1634-04-4 9.32 73.00 41823 14 15 cis-1,2-Dichloroethene 156-59-2 9.66 61.00 10329 ND 1.0 9.73 46.3 93% 16 Bromochloromethane (SS) 130.00 353329 Chloroform 67-66-3 0.00 83.00 ND 1.0 17 0 18 1,1,1-Trichloroethane 71-55-6 0.00 97.00 0 ND 1.0 0 ND 1.0 107-06-2 0.00 62.00 19 1,2-Dichloroethane Carbon tetrachloride 56-23-5 0.00 117.00 0 ND 1.0 20 ND 21 71-43-2 11.22 54929 1.0 Benzene 78.00 22 1,4-Difluorobenzene (SS) 11.80 114.00 1868102 66.1 132% ND 79-01-6 0.00 130.00 0 1.0 23 Trichloroethene 24 1,2-dichloropropane 78-87-5 0.00 63.00 0 ND 1.0 25 cis-1,3-dichloropropene 542-75-6 0.00 75.00 0 ND 1.0 26 108-88-3 14.16 91.00 2818513 61.0 1.0 27 trans-1,3-dichloropropene 10061-02-6 14.16 1.5 1.0 75.00 25081 ND 28 1.1.2-Trichloroethane 79-00-5 0.00 1.0 97.00 0 29 Tetrachioroethene 127-18-4 15.36 164.00 38980 1.4 1.0 30 1,2-Dibromoethane 106-93-4 0.00 107.00 ND 1.0 0 31 ND Chlorobenzene 108-90-7 16.16 112.00 41808 1.0 32 Ethyl benzene 16.64 5.1 1.0 100-41-4 91.00 587629 33 m,p-Xylene 1330-20-7 16.87 91.00 6.9 1.0 1213238 34 o-Xylene 95-47-6 17.40 91.00 241028 2.6 1.0 35 Styrene 100-42-5 17.29 104.00 190040 2.9 1.0 36 1, 1, 2, 2-Tetrachloroethane 79-34-5 17.57 83.00 18408 ND 1.0 37 Bromofluorobenzene (SS) 52.0 17.96 95.00 780095 104% 38 1,3,5-Trimethylbenzene 108-67-8 19.26 105.00 32851 ND 1.0 39 1,2,4-Trimethylbenzene 95-63-6 19.81 105.00 57738 ND 1.0 1.0 40 1,3-Dichlorobenzene 541-73-1 0.00 ND 146.00 0 41 Benzyl chloride 100-44-7 19.59 10845 1.0 91.00 ND 42 1,4-Dichlorobenzene 106-46-7 0.00 146.00 0 ND 1.0 43 1,2-Dichlorobenzene 95-50-1 0.00 146.00 0 ND 1.0 44 0.00 1,2,4-Trichlorobenzene 120-82-1 ND 1.0 180.00 0 45 Hexachlorobutadiene 87-68-3 0.00 225.00 ND 1.0 Calibration Data: NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv 615\_10T.D 615\_20I.D

ND = Not Detected at the Reporting Limits.

Date Printed:

Report: TO-15RPT3.XLS SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

9/8/00 10:13 AM

<sup>\*\*</sup>Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets.\*\*

Sample: Philip 196471 Sevenson 8/28/00 can 93277 Dil. Fact: 2.4 Autosampler: 13 nation off; cryotrap -5C;to15\_lci; Nexts Area 13 DDU (07-06-01) 5970MSD1 Misc: C:\HPCHEM\1\9700\ File: 1418087.D Reporting Method: 9700IS Limits iS/Surr. CAS# R.T. ppbv Qion ppbv Recovery Cmpd # Compound Area 16.07 1469027 Chlorobenzene-d5 (IS) 117.00 50.0 100% 1 75-71-8 2.08 11639 1.2 Dichlorodifluoromethane (12) 85.00 ND 2 3 Chloromethane 74-87-3 0.00 52.00 0 ND 1.2 0.00 ND 1.2 76-14-2 85.00 0 1,2- Cl- 1,1,2,2-F ethane (114) 4 0.00 ND 75-01-4 0 1.2 5 Vinyl chloride 62.00 106-99-0 0.00 ND 1.2 54.00 0 6 1,3-Butadiene 0.00 7 Bromomethane 74-83-9 94:00 0 ND 1.2 8 Chloroethane 75-00-3 0.00 64.00 0 ND 1.2 0.00 Trichlorofluoromethane (11) 75-69-4 101.00 0 ND 1.2 9 1.1-Dichloroethene 75-35-4 0.00 61.00 0 ND 1.2 10 1,1,2- Cl 1,2,2- F ethane (113) 76-13-1 0.00 1.2 11 151.00 ND 75-09-2 7.42 12 Methylene Chloride 84.00 100011 4.4 1.2 0.00 13 1.1-dichloroethane 75-34-3 0 ND 1.2 63.00 14 Methyl t-butyl ether (MTBE) 1634-04-4 9.28 73.00 82490 2.1 1.2 156-59-2 0.00 ND 15 cis-1,2-Dichloroethene 61.00 1.2 0 16 Bromochloromethane (SS) 9.74 130.00 41.6 321673 83% 17 Chloroform 67-66-3 0.00 1.2 83.00 ND 18 1,1,1-Trichloroethane 71-55-6 0.00 0 ND 1.2 97.00 1,2-Dichloroethane 0.00 ND 19 107-06-2 0 1.2 62.00 20 Carbon tetrachloride 56-23-5 0.00 ND 1.2 117.00 0 21 Benzene 71-43-2 11.21 1.2 78.00 2.5 136976 22 1,4-Difluorobenzene (SS) 11.81 114.00 1722785 60.1 120% 23 Trichloroethene 79-01-6 0.00 130.00 ND 1.2 0 24 1,2-dichloropropane 78-87-5 0.00 0 ND 1.2 63.00 25 0.00 cis-1,3-dichloropropene 542-75-6 75.00 0 ND 1.2 26 108-88-3 14,16 91.00 2413043 64.9 1.2 27 10061-02-6 trans-1,3-dichloropropene 14.16 75.00 20943 1.2 1.6 28 1,1,2-Trichloroethane 0.00 79-00-5 1.2 97.00 0 ND 29 Tetrachloroethene 0.00 127-18-4 0 ND 1.2 164.00 30 1.2-Dibromoethane 106-93-4 0.00 1.2 107.00 0 ND 31 Chlorobenzene 108-90-7 0.00 112.00 ND 1.2 0 32 Ethyl benzene 16.67 100-41-4 91.00 1.2 131633 1.4 33 m,p-Xylene 1330-20-7 16.88 91.00 1.2 2.1 296332 34 o-Xylene 95-47-6 17.41 91.00 1.2 65903 ND 35 Styrene 100-42-5 17.32 1.2 104.00 30985 ND 36 1,1,2,2-Tetrachloroethane 79-34-5 1.2 0.00 83.00 ٥ ND 37 Bromofluorobenzene (SS) 17.97 95.00 53.5 814800 107% 38 1,3,5-Trimethylbenzene 108-67-8 19.29 105.00 11273 ND 1.2 39 1,2,4-Trimethylbenzene 95-63-6 19.82 105.00 25088 ND 1.2 1,3-Dichlorobenzene 40 541-73-1 0.00 146.00 ND 1.2 0 41 Benzyl chloride 100-44-7 20.47 1.2 91.00 39925 1.7 42 1,4-Dichlorobenzene 106-46-7 0.00 146.00 0 ND 1.2 43 1,2-Dichlorobenzene 95-50-1 0.00 146.00 ND 1.2 0 44 1.2,4-Trichlorobenzene 120-82-1 0.00 180.00 0 ND 1.2 45 Hexachlorobutadiene 87-68-3 0.00 1.2 225.00 NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv Calibration Data: 615\_10T.D 615\_20I.D 615\_30H.D

Date Printed: ND = Not Detected at the Reporting Limits.

Report: TO-15RPT3.XLS SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

9/8/00 10:17 AM

<sup>\*\*</sup>Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets.\*\*

Sample	: Philip 196471 Sevenson 8/28/00	can 12424	1 0/	Α	utosampler: 1	14	Dil. Fact	
Hisc:	nafion off; cryotrap -5C;to15_lci;	Gode to Bop	oca ADA(a	27-06-01				5970MSD
Method		ile: C:VHP	CHEM/1/9	700\	1418088.D		Reporting	
							Llmits	IS/Sun
Cmpd i	# Compound	CAS#	R.T.	Qion	Area	ppbv	bbpA	Recove
1	Chlorobenzene-d5 (IS)		16.07	117.00	1448294	50.0		100%
2	Dichlorodifluoromethane (12)	75-71-8	2.11	85.00	12685	ND		
3	Chloromethane	74-87-3	0.00	52.00	0	ND	1.3	
4	1,2- CF 1,1,2,2-F ethane (114)	76-14-2	0.00	85.00	0	ND	1.3	
5	Vinyl chloride	75-01-4	0.00	62.00	0	ND	1.3	
6	1,3-Butadiene	106-99-0	0.00	54.00		ND	1.3	
7	Bromomethane	74-83-9	0.00	94.00	0	ND	1.3	
8	Chloroethane	75-00-3	0.00	64.00	0	, ND	1.3	
9	Trichlorofluoromethane (11)	75-6 <del>9-4</del>	6.03	101.00	26478	ND	1.3	
10	1,1-Dichloroethene	75-35-4	0.00	61.00	0	ND	1.3	
11	1,1,2- Cl 1,2,2- F ethane (113)	76-13-1	0.00	151.00	0	ND	1.3	
12	Methylene Chloride	75-09-2	7.42	84.00	76135	3.6	1.3	
13	1,1-dichloroethane	75-34-3	0.00	63.00	0	ND	1.3	
14	Methyl t-butyl ether (MTBE)	1634-04-4	9.30	73.00	95452	2.6	1.3	
15	cis-1,2-Dichloroethene	156-59-2	0.00	61.00	0	ND	1.3	
16	Bromochloromethane (SS)		9.74	130.00	346173	45.4		91%
17	Chloroform	67-66-3	0.00	83.00	0	ND	1.3	
18	1,1,1-Trichloroethane	71-55-6	0.00	97.00	0	ND	1.3	
19	1,2-Dichloroethane	107-06-2	0.00	62.00	Ö	ND	1.3	
20	Carbon tetrachloride	56-23-5	0.00	117.00	0	ND	1.3	
21	Benzene	71-43-2	11.21	78.00	152783	2.9	1.3	
	1,4-Difluorobenzene (SS)	, , , , , , , , , , , , , , , , , , , ,	11.81	114.00	1610606	57.0		114%
22	Trichloroethene	79-01-6	0.00	130.00	0 10000	ND	1,3	11770
23	1,2-dichloropropane	79-01-0 78-87-5	0.00	63.00	0	ND	1.3	
24 25	cis-1,3-dichloropropene	542-75-6	0.00	75.00	0	ND	1.3	
	Toluene	108-88-3	14.18	91.00	2666089	75.8	1.3	
26 27	trans-1,3-dichloropropene	10061-02-6	14.16	75.00	22820	1.8	1.3	
27	• •	79-00-5	0.00	97.00	22020 0	ND.	1.3	
28	1,1,2-Trichloroethane Tetrachloroethene	79-00-5 127-18-4	0.00			ND.	1.3	
29				164.00	0			
30	1,2-Dibromoethane	106-93-4	0.00	107.00	0	ND ND	1.3	
31	Chlorobenzene	108-90-7	0.00	112.00	100750	ND	1.3	
32	Ethyl benzene	100-41-4	16.67	91.00	106750	ND	1.3	
33	m,p-Xylene	1330-20-7	16.88	91.00	244320	1.8	1.3	
34	o-Xylene	95-47-6	17.43	91.00	56301	ND	1.3	
35	Styrene	100-42-5	17.32	104.00	17478	ND	1.3	
36	1,1,2,2-Tetrachloroethane	79-34-5	0.00	83.00	O	ND	, 1.3	
37	Bromofluorobenzene (SS)		17.97	95.00	784849	52.3		105%
38	1,3,5-Trimethylbenzene	108-67-8	19,12	105.00	26992	ND	1.3	
	1,2,4-Trimethylberizene	95-63-6	19.82	105.00	23475	ND	1.3	
40	1,3-Dichlorobenzene	541-73-1	0.00	146.00	0	ND	1.3	
	Benzyl chloride	100-44-7	20.47	91,00	28136	1.3	1.3	
42	1,4-Dichlorobenzene	106-46-7	0.00	146.00	٥	ND	1.3	
43	1,2-Dichlorobenzene	95-50-1	0.00	146.00	0	ND	1.3	
44	1,2,4-Trichlorobenzene	120-82-1	0.00	180.00	٥	ND	1.3	
45	Hexachlorobutadiene	87-68-3	0.00	225.00	O	ND	1.3	
<u></u>	Calibration Data: NIST Tra	ceable Standard	d Cylinder:	Spectra G	ases L69236,	1ppmv		
	615_10T.D	615_201.D			615	_30H.D		
	••••	0 10:20 AM	Report: T	O-15RPT1				

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Sample:	Philip 196471 Sevenson 8/30/				itosampler: 1	15	Dil. Fact:	
/lisc:	nafion off; cryotrap -5C;to15_lo	si; N. Debristácia	Pad &D	1607-66-61	)	•		5970MSD
nethod:	9700IS	File: C:\HF	CHEM\1\9	700\	1418089B.D		Reporting	
							Limits	IS/Surr
Cmpd #	Compound	CAS#	R.T.	Q ion	Area	pp <b>bv</b>	ppbv	Recove
1	Chlorobenzene-d5 (IS)		16.07	117.00	1062875	50.0		100%
2	Dichlorodifluoromethane (12)	75-71-8	2.15	85.00	12062	ND	1.4	
3	Chloromethane	74-87-3	0.00	52.00	0	ND	1.4	
4	1,2- Cl- 1,1,2,2-F ethane (114)	76-14-2	0.00	85.00	0	ND	1.4	
5	Vinyl chloride	75-01-4	0.00	62.00	0	ND	1.4	,
6	1,3-Butadiene	10 <del>6</del> -99-0	0.00	54.00	. 0	ND	1,4	
7	Bromomethane	74-83-9	0.00	94.00	0	ND	1.4	
8	Chloroethane	75-00-3	0.00	64.00	O	ND	1.4	
9	Trichlorofluoromethane (11)	75 <del>-69-4</del>	0.00	101.00	. 0	ND	1.4	
10	1.1-Dichloroethene	r 75-35-4	0.00	61.00	0	ND	1.4	
11	1,1,2- Cl 1,2,2- F ethane (113)	76-13-1	0.00	151.00	0	ND	1.4	
12	Methylene Chloride	75-09-2	7.43	84.00	40696	2.9	1.4	
13	1,1-dichloroethane	75-34-3	0.00	63.00	0	ND	1.4	
14	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00	0	ND	1.4	
15	cis-1,2-Dichloroethene	156-59-2	0.00	61.00	0	ND	1.4	
16	Bromochloromethane (SS)	100.00.2	9.72	130.00	256093	45.7		91%
17	Chloroform	67-66-3	0.00	83.00	250035	ND	1.4	± 170
		71-55-6	0.00	97.00	0	ND	1.4	
18	1,1,1-Trichloroethane	107-06-2	0.00	62.00	0	ND	1.4	
19	1,2-Dichloroethane				· <del>-</del>			
20	Carbon tetrachloride	56-23-5	0.00	117.00	0	ND	1.4	
21	Benzene	71–43-2	11.23	78.00	21056	ND	1.4	
22	1,4-Difluorobenzene (SS)	<b>770</b> 04 0	11.79	114.00	1385474	66.8	4 4	134%
23	Trichloroethene	79-01-6	0.00	130.00	0	ND	1.4	
24	1,2-dichloropropane	78-87-5	0.00	63.00	0	ND	1.4	
25	cis-1,3-dichloropropene	542-75-6	0.00	75. <b>0</b> 0	0	ND	1.4	
26	Toluene	108-88-3	14.17	91.00	920593	40.0	1.4	
	trans-1,3-dichloropropene	10061-02-6	0.00	75.00	0	ND	1.4	
28	1,1,2-Trichloroethane	79-00-5	0.00	97.00	0,	ND	1.4	
	Tetrachloroethene	127-18-4	15.37	164.00	13790	ND	1.4	
	1,2-Dibromoethane	106-93-4	0.00	107.00	0	ND	1.4	
	Chlorobenzene	108-90-7	0.00	112.00	0	ND	1.4	
	Ethyl benzene	100-41-4	16.67	91.00	.70548	ND	1.4	
	m.p-Xylene	1330-20-7	16.89	91.00	145514	1.6	1.4	
	o-Xylene	95-47-6	17.42	91.00	35798	ND	1.4	è
35	Styrene	100-42-5	17.32	104.00	22123	ND	1.4	
36	1,1,2,2-Tetrachloroethane	79-34-5	0.00	83.00	0	ND	1.4	
37	Bromofluorobenzene (SS)		17.97	95.00	552921	50.2		100%
38	1,3,5-Trimethylbenzene	108-67-8	19.12	105.00	22837	ND	1.4	
39	1,2,4-Trimethylbenzene	95-63-6	19.82	105.00	20993	ND	1.4	
40	1,3-Dichlorobenzene	541-73-1	0.00	146.00	0	ND	1.4	
41 I	Benzyl chloride	100-44-7	- 20.54	91.00	139364	9.5	1.4	
42 °	1,4-Dichlorobenzene	106-46-7	0.00	146.00	0	ND	1.4	
	1,2-Dichlorobenzene	95-50-1	0.00	146.00	0	ND	1.4	
44 -	1,2,4-Trichlorobenzene	120-82-1	0.00	180,00	0	ND	1.4	
45 H	Hexachlorobutadiene	87-68-3	0.00	225.00	0	ND	1.4	
(	Calibration Data: NIST T	raceable Standar			ases L69236.	1 ppmv		
	615_10T.D	615_20I.D	<b>a</b>	•		5_30H.D		
	<del>=</del>	/00 3:32 PM	Report: T	O-15RPT3				

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_lci.

\*\*Note that 1 3-hutadiene and MTRF are TO-15 compounds only and not TO-14 tarnete \*\*

Sample: Philip 196471 Sevenson 8/30/00 can 8818B Autosampler: 16 Dil. Fact: 2.1 nafion off; cryotrap -5C;to15\_ld; Sul Area A JDU(07-06-01) 5970MSD1 Misc: C:\HPCHEM\1\9700\ 1418090.D Reporting File: Method: 9700IS Limits IS/Surr. ppbv Recovery CAS# R.T. Q ion Area ppbv Compound Cmpd# 100% 16.07 117.00 1463562 50.0 Chlorobenzene-d5 (IS) 1 2.13 85.00 14554 ND 1.1 75-71-8 Dichlorodifluoromethane (12) 2 0.00 0 ND 1.1 74-87-3 52.00 Chloromethane 3 0.00 85.00 0 ND 1.1 76-14-2 1,2- CL 1,1,2,2-F ethane (114) 4 0 ND 1.1 75-01-4 0.00 62.00 5 Vinyl chloride 106-99-0 0.00 54.00 0 ND 1.1 1.3-Butadiene 6 0.00 O ND 1.1 74-83-9 94.00 Bromomethane 7 75-00-3 0.00 64.00 0 ND 1.1 Chloroethane 8 . 6.06 11594 ND 75-69-4 101.00 1.1 Trichlorofluoromethane (11) 9 ND 1 1,1-Dichloroethene 75-35-4 0.00 61.00 0 1.1 10 76-13-1 0.00 151.00 0 ND 1.1 1,1,2- Cl 1,2,2- F ethane (113) 11 ND 7.45 12698 1.1 Methylene Chloride 75-09-2 84.00 12 ND 75-34-3 0.00 63.00 0 1.1 13 1,1-dichloroethane 0.00 0 ND 1.1 1634-04-4 73.00 14 Methyl t-butyl ether (MTBE) 0 ND 1.1 156-59-2 0.00 61.00 15 cis-1,2-Dichloroethene 41.8 16 Bromochloromethane (SS) 9.74 130.00 322030 84% 0.00 83.00 ND 1.1 67-66-3 0 17 Chloroform 0 0.00 ND 1.1 71-55-6 97.00 18 1.1.1-Trichloroethane 107-06-2 0.00 62.00 0 ND 1.1 19 1.2-Dichloroethane ND 56-23-5 0.00 117.00 0 1.1 20 Carbon tetrachloride 71-43-2 11.21 78.00 76090 1.2 1.1 21 Benzene 57.6 11.81 115% 22 1,4-Difluorobenzene (SS) 114.00 1646049 0.00 ND 1.1 23 Trichloroethene 79-01-6 130.00 0 78-87-5 0.00 63.00 0 ND 1.1 24 1,2-dichloropropane 25 cis-1,3-dichloropropene 542-75-6 0.00 75.00 0 ND 1.1 26.1 108-88-3 14.17 91.00 1106117 1.1 26 Toluene 10061-02-6 ND 27 trans-1,3-dichloropropene 0.00 75.00 0 1.1 0.00 97.00 0 ND 1.1 28 1,1,2-Trichloroethane 79-00-5 0.00 Ö ND 1.1 29 Tetrachloroethene 127-18-4 164,00 0.00 107.00 0 ND 1.1 30 1,2-Dibromoethane 106-93-4 31 Chlorobenzene 108-90-7 0.00 112.00 0 ND 1.1 32 Ethyl benzene 100-41-4 16.67 91.00 65705 ND 1.1 ND 1330-20-7 16.89 151980 1.1 33 m,p-Xylene 91.00 34 o-Xylene 95-47-6 17.42 91.00 55741 ND 1.1 17.32 104.00 11959 ND 35 Styrene 100-42-5 1.1 ND 79-34-5 0.00 83.00 0 1.1 36 1,1,2,2-Tetrachloroethane 17.97 95.00 780147 51.4 103% 37 Bromofluorobenzene (SS) 19.29 ND 1.1 38 1,3,5-Trimethylbenzene 108-67-8 105.00 11704 39 1,2,4-Trimethylbenzene 95-63-6 19.82 34882 ND 1.1 105.00 40 1,3-Dichlorobenzene 541-73-1 0.00 146.00 0 ND 1.1 11.5 41 Benzyl chloride 100-44-7 20.52 91.00 307864 1.1 42 ND 1,4-Dichlorobenzene 106-46-7 0.00 146.00 0 1.1 43 1,2-Dichlorobenzene 0.00 0 ND 1.1 95-50-1 146.00 44 1,2,4-Trichlorobenzene 0.00 180.00 0 ND 1.1 120-82-1 45 0 ND 1.1 Hexachlorobutadiene 87-68-3 0.00 225.00 Calibration Data: NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv 615\_10T.D 615\_201.D 615\_30H.D Report: TO-15RPT3.XLS Date Printed: 9/8/00 10:50 AM

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_lci.

<sup>\*\*</sup>Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets.\*\*

Autosampler: 3 Sample: Philip 196471 Sevenson 8/30/00 can 93141 Dil. Fact: 2.5 nation off; cryotrap -5C;to15\_lci; North Area B DDU (07-06-07) 5970MSD1 Misc: Reporting Method: 9700IS C:\HPCHEM\1\9700\ 1418091.D File: Limits IS/Surr. R.T. ppbv ppbv CAS# Q lon Area Recovery Cmpd # Compound 16.07 117.00 1247092 50.0 100% Chlorobenzene-d5 (IS) 1 2.15 11127 ND 1.3 75-71-8 85.00 2 Dichlorodifluoromethane (12) ND 1.3 74-87-3 0.00 52.00 0 3 Chloromethane 0.00 85.00 0 ND 1.3 76-14-2 1,2- Ci- 1,1,2,2-F ethane (114) 4 75-01-4 0.00 62.00 0 ND 1.3 5 Vinyl chloride 0 ND 1.3 1,3-Butadiene 106-99-0 0.00 54.00 6 0 0.00 ND 94.00 1.3 Bromomethane 74-83-9 7 0.00 O ND 1.3 Chloroethane 75-00-3 64.00 8 0.00 Q ND 1.3 75-69-4 101.00 9 Trichlorofluoromethane (11) 75-35-4 0.00 61.00 0 ND 1.3 1,1-Dichloroethene 10 0.00 ٥ ND 1.3 76-13-1 151.00 1,1,2- Cl 1,2,2- F ethane (113) 11 12 Methylene Chloride 75-09-2 7.47 84.00 11026 ND 1.3 ND 1.3 75-34-3 0.00 0 13 1,1-dichloroethane 63.00 1634-04-4 0.00 73.00 0 ND 1,3 14 Methyl t-butyl ether (MTBE) 156-59-2 0.00 0 ND 1.3 61.00 15 cis-1,2-Dichloroethene 50.0 100% 9.72 328305 Bromochloromethane (SS) 130.00 16 0.00 ND 1.3 17 Chloroform 67-66-3 83.00 0 71-55-6 0.00 97.00 0 ND 1.3 1,1,1-Trichloroethane 18 0.00 ND 1.3 19 1,2-Dichloroethane 107-06-2 62.00 0 1.3 0.00 117.00 0 ND 20 Carbon tetrachloride 56-23-5 21 Benzene 71-43-2 11.23 78.00 22255 ND 1.3 11.79 1537358 22 1,4-Difluorobenzene (SS) 114.00 63.2 126% 23 Trichloroethene 79-01-6 0.00 130.00 0 ND 1.3 0.00 0 ND 1.3 24 1.2-dichloropropane 78-87-5 63.00 0.00 1.3 542-75-6 75.00 0 ND 25 cis-1,3-dichloropropene 26 Toluene 108-88-3 14,19 91.00 384368 12.7 1.3 10061-02-6 0.00 27 trans-1,3-dichloropropene 75.00 0 ND 1.3 28 1,1,2-Trichloroethane 79-00-5 0.00 97.00 0 ND 1.3 29 0.00 0 1.3 Tetrachloroethene 127-18-4 164.00 ND 30 1,2-Dibromoethane 106-93-4 0.00 107.00 0 1.3 ND 1.3 31 Chlorobenzene 108-90-7 0.00 112.00 0 ND 32 Ethyl benzene 100-41-4 16.69 1.3 91.00 22889 ND 33 m,p-Xylene 1330-20-7 16.89 91.00 ND 1.3 57397 1.3 34 o-Xylene 95-47-6 17.42 ND 91.00 23931 35 100-42-5 17.30 1.3 Styrene 104.00 300662 7.0 36 1,1,2,2-Tetrachloroethane 79-34-5 0.00 83.00 0 ND 1.3 17,97 37 Bromofluorobenzene (SS) 95.00 634564 49.1 98% 38 1,3,5-Trimethylbenzene 108-67-8 19,11 105.00 23864 ND 1.3 39 1,2,4-Trimethylbenzene 95-63-6 19.83 105.00 20979 ND 1.3 40 1,3-Dichlorobenzene 541-73-1 0.00 146.00 0 ND 1.3 41 Benzyl chloride 1.3 100-44-7 20,48 91.00 22777 ND 42 1,4-Dichlorobenzene 1.3 106-46-7 0.00 146.00 0 ND 43 1,2-Dichlorobenzene ND 1.3 95-50-1 0.00 146.00 0 44 1.2.4-Trichlorobenzene 1.3 120-82-1 0.00 180.00 0 ND 45 **Hexachlorobutadiene** 1.3 87-68-3 0 ND 0.00 225.00

Calibration Data:

NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv

615\_10T.D

615\_20I.D

615\_30H.D

Date Printed:

9/8/00 3:42 PM

Report: TO-15RPT3.XLS

ND = Not Detected at the Reporting Limits. SS = Surrogate Standard; IS = Internal Standard 50 ng each Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_lci.

Sample:	Philip 196471 Sevenson 8/30/00	) can 12898	,		itosampler: 4	•	Dil. Fact:	2.8
Misc:	nafion off; cryotrap -5C;to15_lci;	E 1st Click to BS	ward b	DU(07-0	6-01)			5970MSD
Method:	9700IS F	ile: C:\HP(	CHEM\1\9	700\	1418092.D		Reporting	
	,						Limits	iS/Sur
Cmpd #	Compound	CAS#	R.T.	Q lon	Агеа	ppbv	ppbv	Recove
1	Chlorobenzene-d5 (IS)		16.07	117.00	1134974	50.0		100%
2	Dichlorodifluoromethane (12)	75-71-8	2.17	85.00	11563	ND	1.4	
3	Chloromethane	74-87-3	0.00	52.00	0	ND	1.4	
4	1,2- Cl- 1,1,2,2-F ethane (114)	76-14-2	0.00	85.00	O	ND	1.4	
5	Vinyl chloride	75-01-4	0.00	62.00	0	ND	1.4	
6	1.3-Butadiene	106-99-0	0.00	54.00	0	· ND	1.4	٠
7	Bromomethane	74-83-9	0.00	94.00	0	ND	1.4	
8	Chloroethane	75-00-3	0.00	64.00	0	ND	1.4	
9	Trichlorofluoromethane (11)	75-69-4	0.00	101.00	0	ND	1.4	
10	4 4 51 11	, 75-35-4	0.00	61.00	0	ND	1.4	
11	1,1,2- Cl 1,2,2- F ethane (113)	76-13-1	0.00	151.00	O	ND	1.4	
12	Methylene Chloride	75-09-2	0.00	84.00	0	ND	1.4	
13	1,1-dichloroethane	75-34-3	0.00	63.00	0	ND	1.4	
14	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00	0	ND	1.4	
15	cis-1,2-Dichloroethene	1 <i>5</i> 6-59-2	0.00	61.00	o	ND	1.4	
16	Bromochioromethane (SS)		9.74	130.00	271067	45.3		91%
17	Chloroform	67-66-3	0.00	83.00	0	ND	1.4	
18	1,1,1-Trichloroethane	71-55-6	0.00	97.00	ō	ND	1.4	
19	1,2-Dichloroethane	107-06-2	0.00	62.00	ō	ND	1.4	
20	Carbon tetrachloride	56-23-5	0.00	117.00	Ō	ND	1.4	
	Benzene	71–43-2	11.25	78.00	17453	ND	1.4	
	1,4-Difluorobenzene (SS)		11.81	114.00	1359608	61.4		123%
	Trichloroethene	79-01-6	0.00	130.00	0	ND	1.4	, , ,
	1,2-dichloropropane	78-87-5	0.00	63.00	Ö	ND	1.4	
	cis-1,3-dichloropropene	542-75-6	0.00	75.00	ō	ND	1.4	
	Toluene	108-88-3	14.19	91.00	345521	14.0	1.4	
	trans-1,3-dichloropropene	10061-02-6	0.00	75.00	0	ND	1.4	
	1,1,2-Trichloroethane	79-00-5	0.00	97.00	ā	ND	1,4	
	Tetrachloroethene	127-18-4	0.00	164.00	0	ND	1.4	
	1,2-Dibromoethane	106-93-4	0.00	107.00	ō	ND	1.4	
	Chlorobenzene	108-90-7	0.00	112.00	ō	ND	1.4	
	Ethyl benzene	100-41-4	16.69	91.00	34016	ND	1.4	
	m,p-Xylene	1330-20-7	16.89	91.00	87778	ND	1.4	
	o-Xylene	95-47-6	17.42	91.00	25205	ND	1.4	
	Styrene	100-42-5	17.34	104.00	16512	ND	1.4	
	1,1,2,2-Tetrachioroethane	79-34-5	0.00	83.00	0	ND	1.4	•
		15-54-0	17.97	95.00	577697	49.1	1,7	98%
	Bromofluorobenzene (SS) 1,3,5-Trimethylbenzene	108-67-8	19.11	105.00	21980	45.1 ND	1.4	9070
	. Tarangan ang kanangan ang kanangan ang kanangan ang kanangan ang kanangan ang kanangan ang kanangan ang kana		19.11			ND	1.4	
	1,2,4-Trimethylbenzene 1,3-Dichlorobenzene	95-63-6 541-73-1	0.00	105.00	20057	ND		
		541-73-1 100 44-7		146.00	0 18983	ND ND	1.4	
	Benzyl chloride	100-44-7 106-46-7	20.48	91.00			1.4	
	1,4-Dichlorobenzene	106-46-7	0.00	146.00	0	ND	1.4	
	,2-Dichlorobenzene	95-50-1	0.00	146.00	0	ND	1.4	
	1,2,4-Trichlorobenzene	120-82-1	0.00	180.00	0	ND	1.4	•
45 H	lexachlorobutadiene	87-68-3	0.00	225.00	0 ases L69236,	ND	1.4	

Date Printed: ND = Not Detected at the Reporting Limits.

9/8/00 3:45 PM

Report: TO-15RPT3.XLS SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_lci.

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

8100 Brownleigh Drive, Suite 120 Raleigh, NC 27617



919 510-0228 Telephone

919 510-0141 Fax

Web Site: www.rtp-labs.com

## TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin Project No: 196471

Sample Date: 8/28/2000

Matrix: Air in Summa Canister

Analysis Date: 9/8/2000

Date Received: 9/1/2000

Sample ID:	1418085 canistér 12461	N. Debris/Soil	Pad	JDU (07-06-01)	
Compound		Estimated ppbv*			
Hexane 3-methyl hexane 2,2,4-trimethyl pe Heptane	entane	50 42 38 39			
Sample ID:	1418086 canister A220	S.W. Area A	7 DA (0-	4-06-01)	
Compound	]	Estimated ppbv*			······
2-methyl pentane 2,2,-dimethyl hex Nonane	ane	34 20 15			
Sample ID:	1418087 canister 93277	North Ara B	<i>0</i> 9	v (04.06.00)	
Compound	<u> </u>	Estimated ppbv*			······································
Hexane 2-methyl pentane 3-methyl hexane Heptane	·	26 8 25 24			

10

File: 196471.doc/als

1-methyl-4-(1-methyethyl)-1,3-cyclohexadiene

<sup>\*</sup>Estimated values were calculated against the  $d_{\mathcal{I}}$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

#### Research Triangle Park Laboratories, Inc. 8100 Brownleigh Drive, Suite 120 Ralcigh, NC 27617



919 510-0228 Telephone

919510-0141 Fax

Web Site: www.rtp-labs.com

### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin

Project No: 196471

Sample Date: 8/28/2000

Matrix: Air in Summa Canister

Analysis Date: 9/8/2000

Date Received: 9/1/2000

Sample ID:

1418088 canister 12424 Gate to Bispad Stu (07-06-01)

Compound	Es	stimated ppbv*	
Pentane		10	•
Hexane		29	
3-methyl hexan	e	32	
2,2,4-trimethyl	pentane	17	
Heptane	•	29	
Sample Date: Sample ID:	8/30/2000 1418089 canister 93300 /V	ertic of Debis/Soul Park	JDV (07-06-61)
Compound	Est	timated ppbv*	

File: 196471.doc/als

Нехапе

<sup>\*</sup>Estimated values were calculated against the  $d_5$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

8100 Brownleigh Drive, Suite 120 Raleigh, NC 27617



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Web Site: www.rtp-labs.com

## TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin

Project No: 196471

Sample Date: 8/30/2000

Matrix: Air in Summa Canister

Analysis Date: 9/8/2000

Date Received: 9/1/2000

Sample ID:

1418090 canister 8818B S.W Area A

(10 do-FO) UOR

Compound		Estimated ppbv*
2-butenal		25
Dimethyl disulf	ide	136
Methyl ethyl dis		31
Methyl isopropy		6
Dimethyl trisulf		144
Methyl isopenty		5
Dimethyl tetrasi	- · · · · · · · · · · · · · · · · · · ·	32
Sample ID:		No. The of Area B Dov (67-06-01)  Estimated ppbv*
2-ethyl hexanal 1-methyl-4-(1-m	ethylethyl)-1,3-cyclohexadi	12 iene 7
Sample ID:	1418092 canister 12898	E of 150 gate to 13.0 pad (100-010-01) Joi
Compound		Estimated ppbv*
l-methyl-4-(l-mo	ethylethyl)-1,3-cyclohexadio	ene 8

File: 196471.doc/als



# Chain of Custody Record

Research Triangle Park Laboratories, Inc 8100 Brownleigh Drive, Suite 120 Phone: 919-510-0228 Fax: 919-510-0141

Web Site: www.rtp-labs.com

Client Schlusm Environm	what	S. Li	olect Manager	Phone I			ንአ		Fax Nun 658 -		Date: 83100		
Address C/o Olin Corp. Q 51 Fames St.						Requested Analyses					Pageof		
city bilmington	St	ale 1 A	ZIp Code DIST	s	ners		,	The second secon					
1 1	l Name:	Reme	eliation	Preservatives	Containers	15	المحرار				Comments		
Sample ID No. and Description	Date	Time	Matrix Air, Liq, Solid	Pres	# 00	7					-±196471		
12461 Nop Debis/Soil Pad	8-28	1700_	Au			\	A	14	180	\$5			
AZZO SWOT ALEA A	8-18	1700					_/\			86			
93277 North of Also B	8-28	1700				$\downarrow \downarrow$			0	87	Do not		
12424 Gate to Biopad	8-28	1700							0	\$8	analyize other		
93300 N. of Dehris/Soil Pad	8-30	1715				\			10	89	Canisters, Just		
8818B SW of Area A	8-30	175			· 				0	90	Clean.		
93,41 North of Area B	8-30	1715	<u> </u>						10	91			
12898 E 15t gate 10 Biopad	8-30	1715	Air	-		<u>/_</u>	\			92			
QU (07.06.01)													
	·				~ <del></del>								
Turn Around Time Requested for Report: Business Days; "Rush Multipliers (XX)  1 day"(4x) 2 days"(3x) 3 days"(2x) 5 days"(1.5x) 10 days"(1.1x) 15 days"				avie	\$p	eclal QC	Requ	lrements	*		Possible Hazarda/ Known Concentrations:		
Relinquished By:	XC. I) SYED G	Dale: 8/31/0:	7 1705		Re	celved	By:	Sh	iff	125	Lac time		
Ralinquished By. Via Fel &		Date:	Titme:		Re	calved	By:	7.1	•	Ź	Ales 9-1-00 Time: 10:00		



#### INDUSTRIAL HYGIENE

#### ENVIRONMENTAL TESTING

• EPA/NVLAP 101262-0

• AIHA ACCREDITATION NO. 100439

• NY DOH 10903 • PA DER 06-353 \* NJ DEP 77678

# ANALYTICAL REPORT

Client:

Report to:

Sevenson Environmental Services, Inc.

Project:

196388

Received: Adam Hibbard

30-AUG-00

Sevenson Environmental Services, Inc.

Reported:

11-SEP-00

51 Eames Street

Willimington MA 01887

Project Description:

Olin Remediation: TO-15

Rush Analysis

Sampled: 29-AUG-00 17:00

RESULT

UNITS

CONCENTRATION UNITS

12311 Work Zone Area A Lab Sample: 1417727

See Attached Report

Final sample concentrations calculated from sample areas supplied on chain of custody. < Indicates less than the limit of quantitation.

Philip 196388 Sevenson-Olin 8/29/00 Area A Autosampler: 3 Dil. Fact: 2.5 Sample: nation off; 500ml; can 12311 5970MSD1 Misc: C:\HPCHEM\1\82300\ 1417727.D Reporting Method: 82300IS File: Limits IS/Surr. CAS# R.T. Q lon Area ppbv Recovery Cmpd# Compound ppbv Chlorobenzene-d5 (IS) 16.10 117.00 660562 50.0 100% 1 2 Dichlorodifluoromethane (12) 75-71-8 2.22 85.00 15258 ND 1.3 ND 74-87-3 0.00 52.00 0 1.3 3 Chloromethane 4 1,2- Cl- 1,1,2,2-F ethane (114) 76-14-2 0.00 85.00 0 ND 1.3 0.00 0 ND 75-01-4 62.00 1.3 5 Vinyl chloride 0.00 0 ND 106-99-0 54.00 1.3 6 1,3-Butadiene 7 74-83-9 0.00 94.00 0 ND Bromomethane 1.3 0.00 8 Chloroethane 75-00-3 64.00 0 ND 1.3 9 Trichlorofluoromethane (11) 75-69-4 0.00 101.00 0 ND 1.3 0.00 0 10 1,1-Dichloroethene 75-35-4 61.00 ΝD 1.3 0.00 0 11 1,1,2- Cl 1,2,2- F ethane (113) 76-13-1 151.00 ND 1.3 75-09-2 7.48 12 Methylene Chloride 84.00 76589 3.2 1.3 13 1,1-dichloroethane 75-34-3 0.00 63.00 ND 0 1.3 1634-04-4 0.00 0 14 Methyl t-butyl ether (MTBE) 73.00 ND 1.3 0 ND 15 cis-1,2-Dichloroethene 156-59-2 0.00 61.00 1.3 Bromochloromethane (SS) 9.78 205452 41.8 16 130.00 84% 0.00 17 Chloroform 67-66-3 83.00 ũ ND 1.3 18 1,1,1-Trichloroethane 71-55-6 0.00 0 ND 1.3 97.00 1,2-Dichloroethane 0.00 19 107-06-2 62.00 ũ ND 1.3 20 Carbon tetrachloride 56-23-5 0.00 117.00 0 ND 1.3 21 Benzene 71-43-2 11.26 78.00 19637 ND 1.3 1,4-Difluorobenzene (SS) 22 11.83 114.00 1047745 47.0 94% 23 Trichloroethene 79-01-6 0.00 130.00 ND 0 1.3 24 1,2-dichloropropane 0.00 78-87-5 63.00 0 ND 1.3 25 cis-1,3-dichloropropene 0.00 75.00 542-75-6 Ö ND 1.3 26 Toluene 108-88-3 14.21 401854 91.00 4.4 1.3 27 trans-1,3-dichloropropene 10061-02-6 0.00 75.00 0 ND 1.3 28 1,1,2-Trichloroethane 79-00-5 13.62 97.00 38224 ND 1.3 29 Tetrachloroethene 127-18-4 0.00 164.00 ũ ND 1.3 30 1,2-Dibromoethane 0.00 106-93-4 107.00 0 ND 1.3 31 Chlorobenzene 108-90-7 0.00 112.00 Ö ND 1.3 32 Ethyl benzene 16.70 91.00 100-41-4 26424 ND 1.3 33 m,p-Xylene 1330-20-7 16.92 91.00 54750 ND 1.3 34 o-Xylene 95-47-6 17.46 91.00 22161 ND 1.3 35 Styrene 17.35 100-42-5 104.00 23571 ND 1.3 36 1,1,2,2-Tetrachloroethane 79-34-5 0.00 83,00 ND 0 1.3 Bromofluorobenzene (SS) 37 18.00 95.00 258709 43.7 87% 38 1,3,5-Trimethylbenzene 19.30 108-67-8 105.00 11734 ND 1.3 39 1,2,4-Trimethylbenzene 95-63-6 19.85 105.00 ND 21835 1.3 40 1,3-Dichlorobenzene 20.04 541-73-1 146.00 11308 ND 1.3 41 Benzyl chloride 100-44-7 20.48 91.00 129496 3.4 1.3 42 1,4-Dichlorobenzene 106-46-7 20.04 146.00 11308 ND 1.3 43 1,2-Dichlorobenzene 95-50-1 0.00 146.00 ND 1.3 44 1,2,4-Trichlorobenzene 120-82-1 23.53 180.00 11881 ND 1.3 45 Hexachlorobutadiene 87-68-3 24.55 225.00 ND 1.3 13615 Calibration Data: NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv 615\_10N.D 615\_20F.D 615\_30F.D Date Printed: 8/31/00 9:42 AM Report: TO-15RPT3,XLS

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_lci.

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

8100 Brownleigh Drive, Suite 120 Raleigh, NC 27617



919 510-0228 Telephone

919510-0141 Fax

Web Site: www.rtp-labs.com

# TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin

Project No: 196388

Sample Date: 8/29/2000

Matrix: Air in Summa Canister

Analysis Date: 8/30/2000

Date Received: 8/30/2000

Sample ID:

1417727 canister 12311 "Work Zone Area A 1700 hrs"

Compound

Estimated ppbv\*

Acetone	7
Carbon disulfide	7
2,4,4-trimethyl-1-pentene	34
Trimethyl-1,3-cyclopentadiene	9
1-methyl-3-(1-methylethyl) benzene	252
1-methyl-4-(1-methylethyl) 1,4-cyclohexadiene	13
1-methyl-4-(1-methylethyl) 1,3-cyclohexadiene	24

<sup>\*</sup>Estimated values were calculated against the  $d_5$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

File: 196388.doc/als

OTP P.83

Research Triangle Park Laboratories, Inc 8100 Brownleigh Drive, Suite 120———

Raieigh, North Carolina 27617 (new zipcode)
Phone: 919-510-0228 Fax: 919-510-0141
Web Site: www.np-labs.com

ISO 17025 Compliant for Testing Labs

Chain of Custody Record



Sevenson Engran	menty		roject Manager		453	5-9628	9		Number 58 - 8 74	Date: 8/29/00			
Address % Olin Q 51 Fames St.						Requ	,	d Anal		Page			
W. Louington	Str 		Zip Code <i>0188</i> 7	ves	inera	5				RTP Labs Proj. Trackir 196388	ng No.:		
Sample ID No. and Description	Olin Res	ned.	Matrix Air, Liq. Soild	Preservatives	# of Containers	T Present				Comments	Frædon		
12311 Write zone aven A	8/29/00	1700	A.C.			XX				Analiza			
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Turn Around Time Requested for Report: Business Days; "Rush Multipliers (Xx)			vs.		a Pack: Std ctronic Dall				Poselble Hazards/ Known Conc	entrations: -			
Railingulahed By:	Q D	Date;	Tims		Res	salvad By:	h. s.	alia e	140	Time -	Tane:		
Relinquished By:  A Feel Cone  File: shalo RTP shealals ravision \$172000	Airbill	Dale:	Time		Re	calved By:	De	bro	E	nglist 8.30.00	Thme: 10°, 20		



#### INDUSTRIAL HYGIENE

#### ENVIRONMENTAL TESTING

- EPA/NVLAP 101262-0

• AIHA ACCREDITATION NO. 100439

• NY DOH 10903 • PA DER 06-353

• NJ DEP 77675

# **ANALYTICAL REPORT**

Client:

Sevenson Environmental Services, Inc.

Project:

196766

Report to:

Received: Reported: 12-SEP-00 22-SEP-00

Adam Hibbard

Sevenson Environmental Services, Inc.

51 Eames Street

Willimington MA 01887

E672/Olin Corp: TO-15 + Lib. Search

Sampled 9/7 & 9/8/00

RESULT

UNITS

CONCENTRATION UNITS

**METHOD** 

93081 SW of drum Area A

Project Description:

Lab Sample: 1419195 sampled: 07-SEP-00 17:06

See Attached Report

A301 East of first gate to BC

Lab Sample: 1419196 sampled: 07-SEP-00 17:06

See Attached Report

12618 North of Area B

Lab Sample: 1419197 sampled: 07-SEP-00 17:06

See Attached Report

12467 North of Seci Pad

Lab Sample: 1419198 sampled: 07-SEP-00 17:06

See Attached Repart

12155 South West of Area A

Lab Sample: 1419199 sampled: 08-SEP-00 17:15

See Attached Report



#### INDUSTRIAL HYGIENE

#### ENVIRONMENTAL TESTING

• EPA/NVLAP 101262-0

• AIHA ACCREDITATION NO. 100439 • PA

• NY DOH 10903 • PA DER 06-353 • NJ DEP 77678

Client:

Sevenson Environmental Services, Inc.

Project:

196766

RESULT

UNITS

CONCENTRATION UNITS

METHOD

#### 93218 East of 1st gate to BC

Lab Sample: 1419200 sampled: 08-SEP-00 17:15

See Attached Report

12638 North of Area B

Lab Sample: 1419201

sampled: 08-SEP-00 17:15

See Attached Report

5011

12830 North of concrete seet pad

Lab Sample: 1419202

sampled: 08-SEP-00 17:15

See Attached Report

Final sample concentrations calculated from sample areas supplied on chain of custody. < Indicates less than the limit of quantitation.

Sample: Philip 196766 Sevenson/Olin 9/7/00 Autosampler: 8 Dil. Fact: 1.7

5970MSD1 Misc:

nation off; 500mL; SW Drum Area "A" Method: 9700IS C:\HPCHEM\1\9700\ 1419195.D Reporting

Method:	97001S	file: C:\HP	CHEM/1/9	7001	1419195.D		Kebottinč	
							Limits	IS/Surr.
Cmpd #	Compound	CAS#	R.T.	nol Q	Area	ppbv	ppbv	Recover
1	Chlorobenzene-d5 (IS)		16.09	117.00	1630965	50.0		100%
2	Dichlorodifluoromethane (12)	75-71-8	2.20	85.00	11472	ND	0.9	
3	Chloromethane	74-87-3	0.00	52.00	0	ND	0.9	
4	1,2- Cl- 1,1,2,2-F ethane (114)	76-14-2	0.00	85.00	0	ND	0.9	
- 5	Vinyl chloride	75-01-4	0.00	62.00	. 0	ND	0.9	
6	1,3-Butadiene	106-99-0	0.00	54.00	0	ND	0.9	Ť
7	Bromomethane	74-83-9	0.00	94.00	,0	ND	0.9	٠
8	Chloroethane	75-00-3	0.00	64.00	0	ND	0.9	
9	Trichlorofluoromethane (11)	75-69-4	0.00	101.00	0	ND	0.9	
10	1,1-Dichloroethene	, 75-35 <del>-4</del>	0.00	61.00	0	ND	0.9	
11	1,1,2- Cl-1,2,2- F ethane (113)	76-13-1	0.00	151.00	0	ND	0.9	
12	Methylene Chloride	75-09-2	7.52	84.00	11956	ND	0.9	
13	1,1-dichloroethane	75-34-3	0.00	63.00	0	ND	0.9	
14	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00	0	ND	0.9	
15	cis-1,2-Dichloroethene	156-59-2	0.00	61.00	0	ND	0.9	
16	Bromochloromethane (SS)		9.78	130.00	362049	42.1		84%
17	Chloroform	67-66-3	0.00	83.00	0	ND	0.9	
18	1,1,1-Trichloroethane	71-55-6	0.00	97.00	ō	ND	0.9	
19	1,2-Dichloroethane	107-06-2	0.00	62.00	ō	ND	0.9	
20	Carbon tetrachloride	56-23-5	0.00	117.00	. 0	ND	0.9	
21	Benzene	71-43-2	11.28	78.00	20276	ND	0.9	
22	1,4-Difluorobenzene (SS)	· · · · · · · · · · · · · · · · · · ·	11.83	114.00	1462350	45.9	• • •	92%
23	Trichloroethene	79-01-6	0.00	130.00	0	ND	0.9	V 11.70
24	1,2-dichloropropane	78-87-5	0.00	63.00	ō	ND	0.9	
25	cis-1,3-dichloropropene	542-75-6	0.00	75.00	ō	ND	0.9	
26	Toluene	108-88-3	14.26	91.00	128665	2.2	0.9	
27	trans-1,3-dichloropropene	10061-02-6	0.00	75.00	0	ND	0.9	
28	1,1,2-Trichloroethane	79-00-5	0.00	97.00	ō	ND	0.9	•
29	Tetrachioroethene	127-18-4	0.00	164.00	Ō	ND	0.9	
30	1,2-Dibromoethane	106-93-4	0.00	107.00	ō	ND	0.9	
31	Chlorobenzene	108-90-7	0.00	112.00	ō	ND	0.9	
32	Ethyl benzene	100-41-4	16.72	91.00	22057	ND	0.9	
33	m,p-Xylene	1330-20-7	16.93	91.00	48087	ND	0.9	
	o-Xylene	95-47-6	17.46	91.00	17930	ND	0.9	
	Styrene	100-42-5	0.00	104.00	0	ND	0.9	
36	1,1,2,2-Tetrachioroethane	79-34-5	0.00	83.00	0	ND	0.9	
37	Bromofluorobenzene (SS)		17.99	95.00	875116	51.7	0.0	103%
	1,3,5-Trimethylbenzene	108-67-8	19.15	105.00	21846	ND	0.9	10570
	1,2,4-Trimethylbenzene	95-63-6	19.87	105.00	20132	ND	0.9	
	1,3-Dichlorobenzene	541-73-1	0.00	146.00	20132	ND	0.9	
	Benzyl chloride	100-44-7	0.00	91.00	0	ND	0.9	
	1,4-Dichlorobenzene	106-46-7	0.00	146.00	0	ND	0.9	
	1,4-Dichlorobenzene	95-50-1	0.00	146.00	0	ND ND	0.9	
	1,2,4-Trichlorobenzene	120-82-1	0.00	180.00	0	ND ND	0.9	
	Hexachlorobutadiene	87-68-3	0.00	225.00	0	ND ND	0.9	
		o/-00-3		·			U.J	<u> </u>

Calibration Data:

NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv

615\_10T.D

615\_201.D

615\_30H.D

Date Printed:

9/18/00 10:04 AM

Report: TO-15RPT3.XLS

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

<sup>\*\*</sup>Note that 1.3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets.\*\*

Sample: Philip 196766 Sevenson/Olin 9/7/00

Autosampler: 9

Dil. Fact: 2.6

5970MSD1

nation off; 500mL; E. of gate to BC Misc:

File:

Method:	9700IS	File: C:\HPC	CHEM\1\9	700\	1419196.D	!	Reporting Limits	IS/Surr.
Cmpd #	Compound	CAS#	R.T.	Q ion	Area	ppbv	ppbv	Recovery
1	Chlorobenzene-d5 (IS)		16.09	117.00	1614944	50.0		100%
2	Dichlorodifluoromethane (12)	75-71-8	2.25	85.00	16207	ND	1.3	
3	Chioromethane	74-87-3	0.00	52.00	0	ND	1.3	
4	1,2- Cl- 1,1,2,2-F ethane (114)	76-14-2	0.00	85.00	0.	ND	1.3	
- 5	Vinyl chloride	75-01-4	0.00	62.00	0	ND	1.3	
6	1,3-Butadiene	106-99-0	0.00	54.00	0	ND	1.3	•
7	Bromomethane	74-83-9	0.00	94.00	0	ND	1.3	
8	Chloroethane	75-00-3	0.00	64.00	0	ND	1.3	
9	Trichlorofluoromethane (11)	75-69-4	0.00	101.00	0	/ · ND	1.3	
10	1,1-Dichloroethene	, 75-35-4	0.00	61.00	0	ND	1.3	
11	1,1,2- Cl 1,2,2- F elhane (113)	76-13-1	0.00	151.00	0	ND	1.3	
12	Methylene Chloride	75-09-2	7.52	84.00	11348	ND	1.3	
13	1,1-dichloroethane	75-34-3	0.00	63.00	O	ND	1.3	
14	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00	0	ND	1.3	
15	cis-1,2-Dichloroethene	156-59-2	0.00	61.00	0	ND	1.3	
16	Bromochloromethane (SS)		9.78	130.00	355962	41.9		84%
17	Chloroform	67-66-3	0.00	83.00	0	ND	1.3	
18	1,1,1-Trichloroethane	71-55-6	0.00	97.00	0	ND	1.3	
19	1,2-Dichloroethane	107-06-2	0.00	62.00	0	ND	1.3	
20	Carbon tetrachloride	56-23-5	0.00	117.00	0	ND	1.3	
21	Benzene	71-43-2	11.28	78.00	16061	ND	1.3	
22	1,4-Difluorobenzene (SS)		11.83	114.00	1496853	47.5		95%
23	Trichloroethene	79-01-6	0.00	130.00	σ	ND	1.3	
24	1,2-dichloropropane	78-87-5	0.00	63.00	. 0	ND	1.3	
25	cis-1,3-dichloropropene	542-75-6	0.00	75.00	O	ND	1.3	
26	Toluene	108-88-3	14.24	91.00	175899	4.7	1.3	
27	trans-1,3-dichloropropene	10061-02-6	0.00	75.00	0	ND	1.3	
28	1,1,2-Trichloroethane	79-00-5	13.66	97.00	10254	ND	1.3	
29	Tetrachloroethene	127-18-4	0.00	164.00	O	ND	1.3	
30	1,2-Dibromoethane	106-93-4	0.00	107.00	0	ND	1.3	
31	Chlorobenzene	108-90-7	0.00	112.00	0	ND	1.3	
32	Ethyl benzene	100-41-4	16.72	91.00	19392	ND	1.3	
33	m,p-Xylene	1330-20-7	16.93	91.00	41404	ND	1.3	
34	o-Xylene	95-47-6	17.46	91.00	14886	ND	1.3	
35	Styrene	100-42-5	0.00	104.00	O	ND	1.3	
36	1,1,2,2-Tetrachloroethane	79-34-5	0.00	83.00	O	ND	1.3	
37	Bromofluorobenzene (SS)		17.99	95.00	850580	50.8		102%
	1,3,5-Trimethylbenzene	108-67-8	19,15	105.00	16065	ND	1.3	
	1,2,4-Trimethylbenzene	95-63-6	19.85	105.00	15504	ND	1.3	
	1,3-Dichlorobenzene	541-73-1	0.00	146.00	σ	ND	1.3	
	Benzyl chloride	100-44-7	0.00	91.00	0	ND	1.3	
	1,4-Dichlorobenzene	106-46-7	0.00	146.00	0	ND	1.3	
	1,2-Dichlorobenzene	95-50-1	0.00	146.00	O	ND	1.3	
	1,2,4-Trichlorobenzene	120-82-1	0.00	180.00	0	ND	1.3	
	Hexachlorobutadiene	87-68-3	0.00	225.00	O	ND	1.3	
	Calibration Data: NIST Tr	aceable Standard	Culturators	C	L C022C	4		

Calibration Data:

NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv

615\_10T.D

615\_201.D

Date Printed:

9/18/00 10:05 AM

Report: TO-15RPT3.XLS

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 armu full scan

Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_lci.

<sup>\*\*</sup>Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets.\*\*

Sample: Philip 196766 Sevenson/Olin 9/7/00 Autosampler: 10 Dil. Fact: 1.7 5970MSD1 nation off; 500mL; North of Area "B" C:\HPCHEM\1\9700\ 1410197 D Reporting

Method:	: 9700IS	File: C:\HPCHEM\1\9700\		700\	1419197.D	i	Reporting		
							Limits	IS/Surr.	
Cmpd #	Compound	CAS#	R.T.	Q ion	Area	ppbv	ppbv	Recovery	
1	Chlorobenzene-d5 (IS)		16.10	117.00	1636936	50.0		100%	
2	Dichlorodifluoromethane (12)	75-71-8	2.25	85.00	22980	ND	0.9		
3	Chloromethane	74-87-3	0.00	52.00	0	ND	0.9		
4	1,2- Cl- 1,1,2,2-F ethane (114)	76-14-2	0.00	85.00	0	ND	0.9		
5	Vinyl chloride	75-01-4	0.00	62.00	0	ND	0.9	•	
6	1,3-Butadiene	106-99-0	0.00	54.00	0	ND	0.9		
7	Bromomethane	74-83-9	0.00	94.00	0	ND	0.9		
8	Chloroethane	75-00-3	0.00	64.00	0	ND	0.9		
.9	Trichlorofluoromethane (11)	75-69 <b>-</b> 4	0.00	101.00	. 0	ND	0.9		
10	1,1-Dichloroethene	, 75-35-4	0.00	61.00	0	ND	0.9		
11	1,1,2- Cl 1,2,2- F ethane (113)	76-13-1	0.00	151.00	0	ND	0.9		
12	Methylene Chloride	75-09-2	7.52	84.00	11202	ND	0.9	•	
13	1,1-dichloroethane	75-34-3	0.00	63.00	0	ND	0.9		
14	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00	0	ND	0.9		
15	cis-1,2-Dichloroethene	156-59-2	0.00	61.00	0	ND	0.9		
16	Bromochloromethane (SS)		9.78	130.00	357447	41.5		83%	
17	Chloroform	67-66-3	0.00	83.00	0	ND	0.9		
18	1,1,1-Trichloroethane	71-55-6	0.00	97.00	0	ND	0.9		
19	1,2-Dichloroethane	107-06-2	0.00	62.00	0	ND	0.9		
20	Carbon tetrachloride	56-23-5	0.00	117.00	0	ND	0.9		
21	Benzene	71-43-2	11.28	78.00	20378	ND	0.9		
22	1,4-Difluorobenzene (SS)		11.83	114.00	1798385	56.3		113%	
23	Trichloroethene	79-01-6	0.00	130.00	0	ND	0.9		
24	1,2-dichloropropane	78-87-5	0.00	63.00	0	ND	0.9		
25	cis-1,3-dichloropropene	542-75-6	0.00	75.00	0	ND	0.9		
26	Toluene	108-88-3	14.21	91.00	1028526	17.8	0.9		
27	trans-1,3-dichloropropene	10061-02-6	0.00	75.00	0	ND	0.9		
28	1,1,2-Trichloroethane	79-00-5	13.64	97.00	39092	1.8	0.9		
29	Tetrachioroethene	127-18-4	0.00	164.00	0	ND	0.9		
30	1,2-Dibromoethane	106-93-4	0.00	107.00	0	ND	0.9		
31	Chlorobenzene	108-90-7	0.00	112.00	0	ND	0.9		
32	Ethyl benzene	100-41-4	16.72	91.00	24151	ND	0.9		
33	m,p-Xylene	1330-20-7	16.93	91.00	50650	ON	0.9	•	
34	o-Xylene	95-47-6	17.46	91.00	18284	ND	0.9		
35	Styrene	100-42-5	0.00	104.00	0	ND	0.9		
36	1,1,2,2-Tetrachloroethane	79-34-5	0.00	83.00	0	ND	0.9		
37	Bromofluorobenzene (SS)		17.99	95.00	859158	50.6		101%	
38	1,3,5-Trimethylbenzene	108-67-8	19.15	105.00	19844	ND	0.9		
	1,2,4-Trimethylbenzene	95-63-6	19.87	105.00	18708	ND	0.9		
	1,3-Dichlorobenzene	541-73-1	0.00	146.00	0	ND	0.9		
	Benzyl chloride	100-44-7	20.57	91.00	14552	ND	0.9		
	1,4-Dichlorobenzene	106-46-7	0.00	146.00	0	ND	0.9		
	1,2-Dichlorobenzene	95-50-1	0.00	146.00	Ō	סא	0.9		
	1,2,4-Trichlorobenzene	120-82-1	0.00	180.00	O	ND	0.9	•	
	Hexachlorobutadiene	87-68-3	0.00	225.00	ō	ND	0.9		
	The state of the s	raceable Standard			acac   60226				

Calibration Data:

NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv

615\_10T.D

615\_20I.D

615\_30H.D

Date Printed:

9/18/00 10:06 AM

ND = Not Detected at the Reporting Limits.

Report: TO-15RPT3.XLS SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica: 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_lci.

"Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Research I mangie Fark Labs, site.

TO-14A/TO15 GC/MS Volatiles Report

Sample: Philip 196766 Sevenson/Olin 9/8/00 Dil. Fact: 1.7 Autosampler: 11 nation off; 500mL; North of Area TABLE 5970MSD1 DU (07-06-01) Misc: C:\HPCHEM\1\9700\ Reporting Method: 9700IS File: 1419198.D Limits IS/Surr. ppbv CAS# R.T. Q lon Area ppbv Recovery Compound Cmpd # 16.09 117.00 1622008 50.0 100% Chlorobenzene-d5 (IS) 1 0.8 2.20 17420 ND Dichlorodifluoromethane (12) 75-71-8 85,00 2 0.00 ND 0.8 74-87-3 52.00 0 3 Chloromethane 0 0.8 76-14-2 0.00 85.00 ND 1.2- Cl- 1,1,2,2-F ethane (114) 4 0.00 ND 0.8 75-01-4 62.00 0 5 Viriyl chloride 0.00 0 ND 0.8 106-99-0 54.00 6 1,3-Butadiene 0 ND 0.8 74-83-9 0.00 94.00 Bromomethane 7 75-00-3 0.00 64.00 0 ND 0.8 8 Chloroethane 0.00 ٥ ND 8.0 Trichlorofluoromethane (11) 75-69-4 101.00 9 0.8 1,1-Dichloroethene 75-35-4 0.00 61.00 0 ND 10 ND 0.8 1,1,2- Cl 1,2,2- F ethane (113) 76-13-1 0.00 151.00 0 11 0.8 75-09-2 7.52 84.00 16129 ND Methylene Chloride 12 ND 0.00 0 0.8 75-34-3 63.00 13 1,1-dichloroethane 1634-04-4 0.00 73.00 0 ND 8.0 Methyl t-butyl ether (MTBE) 14 ND 0.8 15 cis-1,2-Dichloroethene 156-59-2 0.00 61.00 0 84% Bromochioromethane (SS) 9.78 130.00 357154 41.8 16 ND 8.0 17 Chloroform 67-66-3 0.00 83.00 0 0.00 0 ND 8.0 71-55-6 97.00 1.1.1-Trichloroethane 18 0 ND 0.8 107-06-2 0.00 62.00 19 1,2-Dichloroethane 0.00 117.00 0 ND 0.8 Carbon tetrachloride 56-23-5 20 71-43-2 ND 0.8 11.28 78.00 23786 21 Benzene 54.0 108% 11.83 114.00 1710754 22 1,4-Difluorobenzene (SS) 79-01-6 0.00 130.00 0 ND 0.8 23 Trichloroethene 78-87-5 0.00 63.00 0 ND 0.8 24 1,2-dichloropropane 0.00 0 ND 8.0 542-75-6 75.00 25 cis-1,3-dichloropropene 0.8 108-88-3 14.22 91.00 484701 8.2 26 Toluene 0.00 ND 8.0 27 trans-1,3-dichloropropene 10061-02-6 75.00 0 ND 0.8 97.00 10976 28 1.1.2-Trichloroethane 79-00-5 13.66 0.00 0 ND 0.8 29 127-18-4 164.00 Tetrachloroethene ND 0.8 106-93-4 0.00 107.00 0 30 1,2-Dibromoethane Chiorobenzene 108-90-7 0.00 112.00 0 ND 0.8 31 ND 0.8 100-41-4 16.72 91.00 27585 32 Ethyl benzene 8.0 1330-20-7 16.93 91,00 62702 ND 33 m,p-Xylene 22635 ND 0.8 o-Xylene 95-47-6 17.46 91.00 34 0.8 100-42-5 0.00 104.00 0 ND 35 Styrene 0.8 79-34-5 0.00 83.00 0 ND 36 1,1,2,2-Tetrachloroethane 17.99 95.00 50.3 101% 37 Bromofluorobenzene (SS) 845310 0.8 1,3.5-Trimethylbenzene 108-67-8 19.13 105.00 28940 ND 38 ND 8.0 39 1,2,4-Trimethylbenzene 95-63-6 19.85 105.00 27683 0.8 40 1.3-Dichlorobenzene 541-73-1 0.00 146.00 0 ND 41 100-44-7 20.57 20423 ND 8.0 Benzyl chloride 91.00 8.0 0 42 1,4-Dichlorobenzene 106-46-7 0.00 ND 146.00 43 0.00 0 ND 0.8 1,2-Dichlorobenzene 95-50-1 146.00 0.00 0.8 44 1,2,4-Trichlorobenzene 120-82-1 180.00 0 ND 45 Hexachlorobutadiene 87-68-3 0.00 225.00 0 ND 0.8 NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv Calibration Data: 615\_10T.D 615\_201.D Date Printed: 9/18/00 10:07 AM Report: TO-15RPT3.XLS

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_lci.

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Dil. Fact: 1.8 Sample: Philip 196766 Sevenson/Olin 9/8/00 Autosampler: 12 nation off; 500mL; SW of Area "A" 5970MSD1 Misc: Method: 9700IS C:\HPCHEM\1\9700\ 1419199.D Reporting Limits IS/Surr. CAS# R.T. Q lon ppbv ppbv Cmpd # Compound Area Recovery 100% 16.09 1611735 50.0 1 Chlorobenzene-d5 (IS) 117.00 75-71-8 2.22 ND 0.9 2 Dichlorodifluoromethane (12) 85.00 15698 74-87-3 0.00 52.00 ND 0.9 3 Chloromethane 0 0.9 1,2- Cl- 1,1,2,2-F ethane (114) 76-14-2 0.00 85.00 0 ND 4 75-01-4 5 Vinyl chloride 0.00 62.00 0 ND 0.9 106-99-0 ND 6 1,3-Butadiene 0.00 54.00 0 0.9 7 Bromomethane 74-83-9 0.00 94.00 0 ND 0.9 75-00-3 0.00 Chloroethane 64.00 0 ND 0.9 8 9 Trichlorofluoromethane (11) 75-69-4 0.00 101.00 0 ND 0.9 75-35-4 0.00 0 1,1-Dichloroethene 61.00 ND 0.9 10 76-13-1 1,1,2- Cl 1,2,2- F ethane (113) 0.00 151.00 0 0.9 11 ND Methylene Chloride 75-09-2 0.00 12 84.00 0 ND 0.9 13 1,1-dichloroethane 75-34-3 0.00 63.00 ۵ ND 0.9 1634-04-4 14 Methyl t-butyl ether (MTBE) 0.00 73.00 0 ND 0.9 15 cis-1,2-Dichloroethene 156-59-2 0.00 61.00 0 ND 0.9 16 Bromochloromethane (SS) 9.78 42.2 130.00 358370 84% 17 Chloroform 67-66-3 0.00 83.00 0 ND 0.9 18 1,1,1-Trichloroethane 71-55-6 0.00 97.00 0 ND 0.9 19 1,2-Dichloroethane 107-06-2 0.00 62.00 0 ND 0.9 20 Carbon tetrachloride 56-23-5 0.00 ND 0.9 117.00 0 21 Benzene 71-43-2 11.28 78.00 21408 ND 0.9 22 1,4-Difluorobenzene (SS) 11.83 114.00 1616748 51.4 103% 23 Trichloroethene 79-01-6 0.00 130.00 0 ND 0.9 24 1,2-dichloropropane 78-87-5 0.00 63.00 0 ND 0.9 25 cis-1,3-dichloropropene 0.00 542-75-6 75.00 0 ND 0.9 26 Toluene 108-88-3 14.26 91.00 103490 1.9 0.9 27 trans-1.3-dichloropropene 10061-02-6 0.00 0.9 75.00 0 ND 28 1,1,2-Trichloroethane 79-00-5 0.00 97.00 0 ND 0.9 29 Tetrachloroethene 127-18-4 0.00 164.00 0 ND 0.9 30 1.2-Dibromoethane 0.00 106-93-4 107.00 0.9 0 ND 31 Chlorobenzene 108-90-7 0.00 112.00 0 ND 0.9 32 Ethyl benzene 100-41-4 16.70 91.00 23908 ND 0.9 33 m,p-Xylene 1330-20-7 16.93 91,00 52544 ND 0.9 34 o-Xylene 95-47-6 17.44 91.00 20763 ND 0.9 35 Styrene 100-42-5 17.35 104,00 0.9 10709 ND 36 1,1,2,2-Tetrachloroethane 79-34-5 17.10 83.00 16471 ND 0.9 37 Bromofluorobenzene (SS) 17.99 95.00 853830 51.1 102% 38 1,3,5-Trimethylbenzene 108-67-8 19.30 105.00 0.9 16526 ND 39 1,2,4-Trimethylbenzene 95-63-6 19.85 105.00 37216 ND 0.9 40 1,3-Dichlorobenzene 541-73-1 0.00 146.00 ND 0.9 0 41 Benzyl chloride 100-44-7 20.57 91.00 0.9 11097 ND 42 1,4-Dichlorobenzene 106-46-7 0.00 146.00 0 ND 0.9 43 1,2-Dichlorobenzene 95-50-1 0.9 0.00 146.00 0 ND 44 1,2,4-Trichlorobenzene 120-82-1 0.00 180,00 0 ND 0.9 45 Hexachlorobutadiene 87-68-3 0.00 225,00 0 ND 0.9 Calibration Data: NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv 615 10T.D 615\_201.D 615\_30H.D

Date Printed: ND = Not Detected at the Reporting Limits.

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

9/18/00 10:08 AM

Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15 Ici.

Report: TO-15RPT3.XLS SS \* Surrogate Standard; IS \* Internal Standard 50 ng each

<sup>\*\*</sup>Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets.\*\*

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TO-14A/TO15 GC/MS Volatiles Report

Philip 196766 Sevenson/Olin 9/8/00 Autosampler: 13 Dil. Fact: 2.1 Sample: 5970MSD1 Misc: nation off; 500mL; East of 1st Gate C:\HPCHEM\1\9700\ Method: 9700IS 1419200.D Reporting File: Limits IS/Surr. CAS# R.T. Q lon ppbv ppbv Recovery Compound Area Cmpd# 16.09 117.00 50.0 100% 1 Chlorobenzene-d5 (IS) 1621264 2 Dichlorodifluoromethane (12) 75-71-8 2.17 85.00 17107 ND 1.0 ND 1.0 74-87-3 0.00 52.00 0 3 Chloromethane 76-14-2 0.00 0 ND 1.0 4 1.2- Cl- 1.1.2.2-F ethane (114) 85.00 75-01-4 0.00 62.00 0 ND 1.0 5 Vinyl chloride 1.3-Butadiene 106-99-0 0.00 54.00 0 ND 1.0 6 74-83-9 0.00 0 ND 1.0 7 Bromomethane 94.00 75-00-3 0.00 0 ND 1.0 Chloroethane 64.00 8 Trichlorofluoromethane (11) 75-69-4 0.00 101.00 0 ND 1.0 9 1.1-Dichloroethene 75-35-4 0.00 61.00 0 ND 1.0 10 1,1,2- Cl 1,2,2- F ethane (113) 76-13-1 0.00 ND 11 151.00 0 1.0 75-09-2 7.52 Methylene Chloride 84.00 24107 ND 1.0 12 0.00 ND 75-34-3 0 1.0 13 1,1-dichloroethane 63.00 1634-04-4 0.00 0 ND 1.0 14 Methyl t-butyl ether (MTBE) 73.00 156-59-2 0.00 15 cis-1,2-Dichloroethene 61.00 0 ND 1.0 361734 16 Bromochloromethane (SS) 9.78 130.00 42.4 85% 17 Chloroform 67-66-3 0.00 83.00 Ö ND 1.0 71-55-6 0.00 0 ND 1.0 18 1.1.1-Trichloroethane 97.00 0.00 19 1,2-Dichloroethane 107-06-2 62.00 0 ND 1.0 56-23-5 0.00 0 20 Carbon tetrachloride 117.00 ND 1.0 ND 21 Benzene 71-43-2 11.26 78.00 35733 1.0 1.4-Difluorobenzene (SS) 11.83 1575933 49.8 22 114.00 100% 23 79-01-6 0.00 ND 1.0 Trichloroethene 130.00 0 78-87-5 0.00 0 ND 1.0 24 1,2-dichloropropane 63.00 0.00 25 cis-1,3-dichloropropene 542-75-6 75.00 0 ND 1.0 108-88-3 14.22 425111 9.0 1.0 26 Toluene 91.00 trans-1,3-dichloropropene 10061-02-6 0.00 27 75.00 0 ND 1.0 28 1,1,2-Trichloroethane 0.00 ND 79-00-5 97.00 0 1.0 29 Tetrachioroethene 127-18-4 0.00 0 ND 1.0 164.00 106-93-4 0.00 ND 30 1.2-Dibromoethane 107.00 0 1.0 31 Chlorobenzene 108-90-7 0.00 ND 1.0 112.00 0 16.70 32 Ethyl benzene 100-41-4 91.00 24744 ND 1.0 1330-20-7 16.93 ND 33 m,p-Xylene 91.00 62516 1.0 34 o-Xylene 95-47-6 17.44 ND 1.0 91.00 20936 35 100-42-5 17.35 ND Styrene 104.00 10058 1.0 1,1,2,2-Tetrachloroethane 79-34-5 0.00 ND 36 83.00 0 1.0 37 Bromofluorobenzene (SS) 17.99 95.00 861366 51.2 102% 38 1.3.5-Trimethylbenzene 108-67-8 19.30 105.00 16175 ND 1.0 1,2,4-Trimethylbenzene 39 95-63-6 19.85 38032 ND 1.0 105.00 40 1,3-Dichlorobenzene 0.00 541-73-1 146.00 Ö ND 1.0 41 Benzyl chloride 100-44-7 20.50 91.00 11935 ND 1.0 42 1.4-Dichlorobenzene 106-46-7 0.00 146.00 0 ND 1.0 43 1,2-Dichlorobenzene 95-50-1 0.00 Ö ND 1.0 146.00 44 1,2,4-Trichlorobenzene 120-82-1 0.00 180.00 0 ND 1.0 45 Hexachlorobutadiene 0.00 1.0 87-68-3 ND 225,00 Ö

Calibration Data:

NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv

615\_10T.D

615\_201.D

615\_30H.D

Date Printed:

9/18/00 10:10 AM

Report: TO-15RPT3,XLS

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_ici.

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Mescaren & riangle Fara Laus, inc.

TO-14A/TO15 GC/MS Volatiles Report

Dil. Fact: 2.8 Philip 196766 Sevenson/Olin 9/8/00 Autosampler: 14 Sample: nation off; 500mL; North of Area "B" 5970MSD1 Misc: C:\HPCHEM\1\9700\ 1419201.D Reporting Viethod: 9700IS File: Limits IS/Surr. CAS# R.T. Q ion ppbv ppbv Recovery Compound Area Cmpd # 117.00 50.0 100% Chlorobenzene-d5 (IS) 16.10 1623780 75-71-8 2.20 85.00 10378 ND 1.4 2 Dichlorodifluoromethane (12) 74-87-3 0.00 ND 1.4 52.00 0 3 Chloromethane 76-14-2 0.00 85.00 0 ND 1.4 1.2- Cl- 1.1.2.2-F ethane (114) 4 0.00 75-01-4 62.00 0 ND 1.4 5 Vinyl chloride 0.00 1.4 6 106-99-0 54.00 0 ND 1.3-Butadiene 74-83-9 0.00 0 1.4 7 94.00 ND Bromomethane Chloroethane 75-00-3 0.00 64.00 0 ND 1.4 8 Trichlorofluoromethane (11) 75-69-4 0.00 101.00 0 ND 1.4 9 75-35-4 0.00 0 ND 1,1-Dichloroethene 61.00 1.4 10 76-13-1 0.00 151.00 0 ND 1.4 1.1.2- Cl 1.2.2- F ethane (113) 11 75-09-2 0.00 ND 84.00 0 1.4 Methylene Chloride 12 13 1,1-dichloroethane 75-34-3 0.00 63.00 0 ND 1.4 1634-04-4 0.00 73.00 0 ND 1.4 14 Methyl t-butyl ether (MTBE) 156-59-2 0.00 0 ND 1.4 15 cis-1,2-Dichloroethene 61.00 Bromochloromethane (SS) 9.78 130.00 355771 41.6 83% 16 67-66-3 0.00 ND 1.4 83.00 0 17 Chloroform 0.00 0 ND 1.4 18 1,1,1-Trichloroethane 71-55-6 97.00 107-06-2 0.00 62.00 0 ND 1.4 1,2-Dichloroethane 19 56-23-5 0.00 117.00 0 ND 1.4 20 Carbon tetrachloride 71-43-2 ND 1.4 11.28 78.00 14150 21 Benzene 11.83 114.00 1539882 48.6 97% 22 1,4-Difluorobenzene (SS) 79-01-6 0.00 ND 1.4 23 Trichloroethene 130.00 0 78-87-5 0.00 63.00 0 ND 1.4 24 1.2-dichloropropane 0.00 ND 25 cis-1,3-dichloropropene 542-75-6 75.00 0 1.4 1.4 14.24 5.5 26 108-88-3 91.00 195776 ND 27 trans-1,3-dichioropropene 10061-02-6 0.00 75.00 1.4 0 79-00-5 13.62 99664 7.4 1.4 28 1,1,2-Trichloroethane 97.00 29 Tetrachloroethene 127-18-4 0.00 164.00 0 ND 1.4 0.00 ND 30 1,2-Dibromoethane 106-93-4 107.00 0 1.4 31 Chlorobenzene 108-90-7 0.00 112.00 0 ND 1.4 ND 32 Ethyl benzene 100-41-4 16.72 91.00 12074 1.4 1330-20-7 ND 1.4 33 m.p-Xylene 16.94 91.00 25295 95-47-6 17.46 ND 1.4 34 o-Xylene 91.00 10549 100-42-5 0.00 ND 1.4 35 Styrene 104.00 0 ND 36 - 1,1,2,2-Tetrachloroethane 79-34-5 0.00 83.00 0 1.4 37 Bromofluorobenzene (SS) 17.99 95.00 861908 51.2 102% 38 1,3,5-Trimethylbenzene 108-67-8 19.15 105.00 ND 1.4 12534 39 1,2,4-Trimethylbenzene 95-63-6 19.87 105.00 11535 ND 1.4 40 1,3-Dichlorobenzene 0.00 ND 1.4 541-73-1 146.00 0 41 ND 1.4 Benzyl chloride 100-44-7 0.00 91.00 0 42 1,4-Dichlorobenzene 106-46-7 0.00 146.00 0 ND 1.4 43 1.4 1,2-Dichlorobenzene 95-50-1 0.00 0 ND 146.00 44 ND 1.4 1,2,4-Trichlorobenzene 120-82-1 0.00 0 180.00 45 Hexachlorobutadiene 87-68-3 1.4 0.00 225.00 0 ND Calibration Data:

Date Printed: 9/18/00 10:14 AM

NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv

615\_10T.D 615\_201.D

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_lci.

ND = Not Detected at the Reporting Limits.

Report: TO-15RPT3.XLS SS = Surrogate Standard; IS = Internal Standard 50 ng each

<sup>\*\*</sup>Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets.\*\*

Sample: Philip 196766 Sevenson/Olin 9/8/00 Dil. Fact: 1.7 Autosampler: 15 nation off; 500mL; N. of concrete Soil Pad 5970MSD1 Misc: Reporting C:\HPCHEM\1\9700\ Method: 9700IS File: 1419202.D Limits IS/Surr. CAS# R.T. Q ion Area ppbv ppbv Recovery Cmpd # Compound 50.0 100% 16.10 117.00 1597358 Chlorobenzene-d5 (IS) 1 ND 0.9 75-71-8 2.23 85.00 18651 Dichlorodifluoromethane (12) 2 ND 0.9 74-87-3 0.00 52.00 0 3 Chloromethane 0.00 0 ND 0.9 76-14-2 85.00 1,2- Cl- 1,1,2,2-F ethane (114) 4 0.00 0 0.9 75-01-4 62.00 ND 5 Vinyl chloride 106-99-0 0.00 54.00 0 ND 0.9 1.3-Butadiene 6 0.00 0 ND 0.9 74-83-9 94,00 7 Bromomethane 0.00 75-00-3 64.00 0 ND 0.9 Chloroethane 8 0.00 0 ND 0.9 75-69-4 101.00 Trichlorofluoromethane (11) 9 75-35-4 0.00 61.00 0 ND 0.9 1.1-Dichloroethene 10 0.00 0 0.9 1,1,2- Cl 1,2,2- F ethane (113) 76-13-1 151.00 ND 11 75-09-2 0.00 84.00 0 ND 0.9 12 Methylene Chloride 0.00 0 0.9 13 1,1-dichloroethane 75-34-3 63.00 ND 0 0.9 1634-04-4 0.00 73.00 ND 14 Methyl t-butyl ether (MTBE) ND 0.9 156-59-2 0.00 61.00 0 cis-1,2-Dichloroethene 15 Bromochioromethane (SS) 9.78 130.00 344364 40.9 82% 16 0.9 67-66-3 0.00 83.00 ND Chloroform 0 17 0.9 18 1,1,1-Trichloroethane 71-55-6 0.00 97.00 0 ND 0.9 0.00 0 ND 19 1.2-Dichloroethane 107-06-2 62.00 ND 20 Carbon tetrachloride 56-23-5 0.00 117.00 0 0.9 71-43-2 11.28 ND 0.9 78.00 21595 21 Benzene 22 1,4-Difluorobenzene (SS) 11.83 114.00 1741032 55.8 112% 0.00 130.00 ND 0.9 23 Trichloroethene 79-01-6 0 0 ND 0.9 78-87-5 0.00 63.00 24 1,2-dichloropropane 0.00 75.00 0 ND 0.9 25 cis-1,3-dichloropropene 542-75-6 14.22 6.0 0.9 26 108-88-3 91.00 339395 Toluene 27 trans-1,3-dichloropropene 10061-02-6 0.00 75.00 0 ND 0.9 1.9 0.9 1.1.2-Trichloroethane 79-00-5 13.64 97.00 40829 28 ND 29 Tetrachloroethene 127-18-4 0.00 164.00 0 0.9 0.00 ND 0.9 30 1.2-Dibromoethane 106-93-4 107.00 0 0.9 0.00 0 ND 31 Chlorobenzene 108-90-7 112.00 21409 ND 0.9 32 Ethyl benzene 100-41-4 16.72 91.00 0.9 1330-20-7 16.93 91.00 44467 ND 33 m,p-Xylene 34 o-Xylene 95-47-6 17.46 91.00 15978 ND 0.9 0.9 35 Styrene 100-42-5 0.00 104.00 0 ND 0.9 79-34-5 0.00 83.00 0 ND 36 1,1,2,2-Tetrachloroethane 37 Bromofluorobenzene (SS) 17.99 95.00 839994 50.7 101% 0.9 38 1,3,5-Trimethylbenzene 108-67-8 19.13 105.00 21035 ND 39 1,2,4-Trimethylbenzene 95-63-6 19.85 105.00 19041 ND 0.9 40 1,3-Dichlorobenzene 0.00 146.00 0 ND 0.9 541-73-1 41 Benzyl chloride 100-44-7 20.55 91.00 47360 1.3 0.9 42 0.00 ND 0.9 1.4-Dichlorobenzene 106-46-7 146.00 0 43 1.2-Dichlorobenzene 95-50-1 0.00 146.00 0 ND 0.9 0.00 0.9 44 1,2,4-Trichlorobenzene 120-82-1 180,00 0 ND 0.9 45 Hexachlorobutadiene 0.00 Ö 87-68-3 225.00 ND NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv Calibration Data: 615\_10T.D 615\_201.D 615\_30H.D 9/18/00 10:16 AM Date Printed: Report: TD-15RPT3.XLS

Col:SPB-1 Fused Silica: 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

NO = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_lci.

<sup>\*\*</sup>Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets.\*\*

8100 Brownleigh Drive, Suite 120 Raleigh, NC 27617



919 510-0228 Telephone

Web Site: www.rtp-labs.com 919510-0141 Fax

#### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin

Project No: 196766

Sample Date: 9/7/2000

Matrix: Air in Summa Canister

Analysis Date: 9/15/2000

Date Received: 9/12/2000

Sample ID:	1419195 canister 93081	"SW of drum Area A	<b>)</b>	
Compound		Estimated ppbv*		
Heneicosane Pentadecane Tetradecane		8 6 24		
Sample ID:	1419196 canister A301	"East of first gate to B	C"	
Compound		Estimated ppbv*		
2,3,7-trimethyl d Heneicosane 2-ethyl-2-methyl-		38 10 8		
Sample ID:	1419197 canister 12618	"North of Area B"		
Сотроилс	***************************************	Estimated ppbv*		
2,4,4-trimethyl-1-2,3,7-trimethyl de 2-ethyl-2-methyl- 2,6,10-trimethyl de	cane tridecanol	11 19 5 17		

<sup>\*</sup>Estimated values were calculated against the  $d_{\mathcal{F}}$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

File: 196766.doc/als

8100 Brownleigh Drive, Suite 120 Raleigh, NC 27617



919 510-0228 Telephone

919 510-0141 Fax Web Site: M

Web Site: www.rtp-labs.com

# TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Sample Date: 9/7/2000

Analysis Date: 9/15/2000

Sample ID:

Contact: Jim Jacklin

Project No: 196766

Matrix: Air in Summa Canister Date Received: 9/12/2000

1419198 canister 12467 "North of Soil Pad"

Compound		Estimated ppbv*	
Tetradecane		17	
Heneicosane		6	
2,6,10-trimethyl	dodecane	15	
Sample Date:	9/8/2000		
	1419199 canister 12155 "	South West of Area A"	
Compound	E	stimated ppbv*	
2,2,7-trimethyl c	ecane	5	
3.8-dimethyl her		13	

Sample Date:

2.6.10-trimethyl dodecane

9/8/2000

Sample ID:

1419200 canister 93218 "East of First Gate to BC"

Compound	Estimated ppbv*	
2,6-dimethyl undecane	11	
2,3,7-trimethyl octane	12	
Tetradecane	23	
Pentadecane	.6	

<sup>\*</sup>Estimated values were calculated against the  $d_5$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

File: 196766.doc/als

8100 Brownleigh Drive, Suite 120 Raleigh, NC 27617



919 510-0228 Telephone 919 510-0141 Fax

Web Site: www.rtp-labs.com

#### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin Project No: 196766

Sample Date: 9/8/2000. Analysis Date: 9/15/2000 Matrix: Air in Summa Canister Date Received: 9/12/2000

Sample ID:

1419201 canister 12638 "North of Area B"

Compound	Estimated ppbv*	
2,2,4-trimethyl pentane	17	
Formic acid, butyl ester	7 .	
Tetradecane	26	
Decyl cylcopentane	7	
8-methyl heptadecane	22	

Sample ID:

1419202 canister 12830 "North of Concrete Soil Pad"

Compound	Estimated ppbv*	
2,4,4-trimethyl-1-pentene	9	,
bis (1-methylethyl) disulfide	11	
n-propyl s-butyl disulphide	29	
bis (1-methylpropyl) disulfide	16	
Heneicosane	5	
Tetradecane	13	

<sup>\*</sup>Estimated values were calculated against the  $d_5$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

File: 196766.doc/als

Research Triangle Park Laboratories, Inc 8100 Brownleigh Drive, Sulte 120 Raieigh, North Carolina 27617 (new zipcode) Phone: 919-510-0228 Fax: 919-510-0141

# **Chain of Custody Record**

ISO 17025 Compliant for Testing Labs



Web Site: www.rtp-labs.com

Client Sevenson Environne	٨ - ٨	A Pr	olect Manager		e Nun		450	مال		x Num		Date: 1627 9-11-00	
Address c/o Olin @ 51 Ea			E1/3	978 -657- 4546 978-657-4 Requested Analyses					Pageof				
City Wilmington	SI	ile A	Zip Code 01887		ห						-	RTP Labs Proj. Tracking No. スペア・ロロ	•
Contract/Purchase Order No.: Pro	Jacl Name:		E672	eservatives	Containers	ท	7-5			THE PROPERTY OF THE PROPERTY O	1	196766	,
Sample ID No. and Description	Date Date	Time	Mairix Air, Liq, Solid	Preserv	# of Cor	1-7	JA J					Comments §	**
95081 SW of drum Area A	9-7-00	1706	A.c_			X	X	14	191	95		Do not	
A301 East of first gale to 1	3c   _					1	_X		_1	96		Analizaother	
12618 North of Area B		<u></u>		-			文	-1-	/	97		anisters.	
12467 North of Sal pad	9-7-00	1700		_	l 	X	X			98		Clean and	
12155 South west of Area A	9-9-00	1715				X	X	_ -		29		recharge Daby.	
93218 East of 1st gate to B	<u> </u>					X	X		J	00		v *	
12638 North of Price B		<u> </u>				X	X	\	Ĵ	01		Sand results	
12830 North of concrete soil	par 9-8-00	17 15	Ax			$\geq$	X			102		Final Results	
						<u></u>						to Adam	
						_				-		Hibbard @	
		_	-		ļ			ļ		<u> </u>	ļ	51 Fames St.	
				_								W. Lunington, MA	
	11-11-11-11-11-11-11-11-11-11-11-11-11-				<u> </u>							01887	
Turn Around Time Requests of for Report: But		-		ys		la Pack: ctronic						Possible Hazards/ Known Concentration	8:
Relinquished By:	ld		9/11/00 Time		Re	colved I	By:r	45_	La	ie_	ナ	_Date:Times-	
Nonneumous: Fel Express Air bill # 82230849672					Received By: Dela English 9-12-0				<i>א</i> 00				



#### INDUSTRIAL HYGIENE

#### ENVIRONMENTAL TESTING

\* EPA/NVLAP 101262-0

- AIHA ACCREDITATION NO. 100439

• NY DOH 10903 • PA DER 06-353 •NJ DEP 77678

# **ANALYTICAL REPORT**

Client:

Report to:

Sevenson Environmental Services, Inc.

Project:

197010

Adam Hibbard Reported:

Received:

20-SEP-00 29-SEP-00

Sevenson Environmental Services, Inc.

51 Eames Street

Willimington MA 01887

Olin Remediation: TO-15

Sampled 9/11 & 13/00

RESULT

UNITS

**METHOD** 

DATE

<u>ANALYST</u>

93020 SW Drum Area A

Project Description:

Lab Sample: 1420168 sampled: 11-SEP-00 17:00

See Attached Report

93229 East of grate to Bio Cal

Lab Sample: 1420169 sampled: 11-SEP-00 17:00

See Attached Report

9428BB North of Area B

Lab Sample: 1420170 sampled: 11-SEP-00 17:00

See Attached Report

9605B North of Soil Pad

Lab Sample: 1420171 sampled: 11-SEP-00 17:00

See Attached Report

93294 SW of Drum Area A

Lab Sample: 1420172 sampled: 13-SEP-00 18:30

See Attached Report



#### INDUSTRIAL HYGIENE

#### **ENVIRONMENTAL TESTING**

• EPA/NVLAP 101262-0 • AIHA ACCREDITATION NO. 100439

• NY DOH 10903 • PA DER 06-353

• NJ DEP 77678

Client:

Sevenson Environmental Services, Inc.

Project:

197010

RESULT

UNITS

**METHOD** 

DATE

**ANALYST** 

A304 East of First gate to BC

Lab Sample: 1420173 sampled: 13-SEP-00 18:30

See Attached Report

9334B North of Soil Pad

Lab Sample: 1420174 sampled: 13-SEP-00 18:30

See Attached Report

12256 North of Area B

Lab Sample: 1420175 sampled: 13-SEP-00 18:30

See Attached Report

< Indicates less than the limit of quantitation.

Sample:		1A//1015 C 9/11/00			utosampler: 3	AND DESCRIPTION OF THE PARTY OF	Dil. Fact:	4.2
Misc:	nation off: 500 mL; can 93020				·			5970MSD1
.Method:	t		HEM\1\92	000/	1420168.D		Reporting	
1110010101							Limits	IS/Surr.
Cmpd #	Compound	CAS#	R.T.	Q lon	Area	ppbv	ppbv	Recovery
1	Chłorobenzene-d5 (IS)		15.10	117.00	1230254	50.0		100%
2	Dichloro difluoromethane (12)	75-71-8	0.00	85.00	0	ND	2.1	
3	Chloromethane	74-87-3	0.00	52.00	0	ND	2.1	
4	1,2- Cl- 1,1,2,2-F ethane (114)		0.00	85,00		ND	2.1	
5	Vinyl chloride	75-01-4	0.00	62,00	0	ND	2.1	
8	1,3-Butadiene	106-99-0	0.00	54.00	0	ND	2.1	
7	Bromomethane	74-83-9	0.00	94.00	0	ND	2.1	
8	Chloroethane	75-00-3	0.00	64.00	. 0	ND	2.1	
8	Trichlorofluoromethane (11)	75-89 <b>-4</b>	0.00	101:00	G	ND	2.1	
10	1,1-Dichloroethene	75-35-4	0.00	61.00	0	ND	2.1	
11	1,1,2- Cl 1,2,2- F ethane (113)		0.00	151.00	. 0	ND	2.1	
12	Methylene Chloride	75-09-2	0.00	84.00	0	ND	2.1	
13	1.1-dichloroethane	75-34-3	0.00	63.00	0	ND	2.1	
14	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00	0	ND	2.1	
15	cis-1,2-Dichloroethene	156-59-2	0.00	61.00	Ö	ND	2.1	
16	Bromochloromethane (SS)	.00 00 2	9.76	130.00	326943	51.0		102%
17	Chloroform	67-66-3	0.00	83.00	0	ND	2.1	
18	1.1,1-Trichloroethane	71-55-6	0.00	97.00	0	ND	2.1	
19	1,2-Dichloroethane	107-06-2	0.00	62.00	Ö	ND	2.1	
	Carbon tetrachloride	56-23-5	0.00	117.00	Ö	ND	2.1	
20	Benzene	71-43-2	11.26	78.00	23472	ND	2.1	
21	•	11-40-6				49.0	- · · ·	98%
22	1,4-Difluoroberzene (SS)	70.01.0	11.83	114.00	1470582		2.1	30%
23	Trichloroethene	79-01-6	0.00	130.00	0	ND ND	2.1	
24	1.2-dichloropropane	78-87-5	0.00	63.00	0	ND	2.1	
25	cis-1,3-dichloropropene	542-75-6	0.00	75.00	0		2.1	
26	Toluene	108-88-3	14.26	91.00	56270	ND ND	2.1	
27	trans-1,3-dichloropropene	10061-02-5	0.00 0.00	75.00	0	ND ND	2.1	
28	1,1,2-Trichloroethane	79-00-5		97.00	0	ND	2.1	
29	Tetrachioroethene	127-18-4	0.00 0.00	164.00	0	ND	2.1	
30	1,2-Dibromoethane	106-93-4		197.00	0	ND ND	2.1	
31	Chlorobenzene	108-90-7	16.15	112,00	12802		2.1	
32	Ethyl benzene	100-41-4	16.72	91.00	25082	ND QN	2.1	
33	m.p-Xylene	1330-20-7	18.94	91.00	59932		2.1	
	o-Xylene	95-47-6	17.45	91.00	28857	ND		
35	Styrene	100-42-5	0.00	104.00	.0	ND	2.1	
	1,1,2,2-Tetrachloroethane	79-34-5	17.57	83.00	20460	ND	2.1	
	Bromofluoroberizene (SS)		18.00	95.00	620140	46.6		93%
	1,3,5-Trimethylbertzene	108-67-8	19.32	105.00	30414	ND	2.1	
	1,2,4-Trimethy/Denzene	95-63-6	19.87	105.00	34538	ND	2.1	
	1,3-Dichlorobenzene	541-73-1	19.95	146.00	20196	ND	2.1	
	Senzyl chloride	100-44-7	0.00	91.00	0	ND	2.1	
	1,4-Dichlorobenzene	106-46-7	20.07	146.00	22871	ND	2.1	
-	1,2-Dichlorobenzene	95-50-1	20.55	146.00	21 126	ND	2.1	
	1,2,4-Trichlorobenzene	120-82-1	23.53	180.00	22377	3.8	2.1	
	Hexachlorobutadiene	87-68-3	24.58	225.00	21184	3.5	2.1	
	1	Traceable Standard	d Cylinder:	Spectra (				
	920_58.D 920_10D.D	920_20C.D	_			0_30C.D		
	Date Printed: 9/2	25/00 9:51 AM	Report: T	O-15RPT	3.XLS			

ND = Not Detected at the Reporting Limits

Col:SPB-1 Fused Silica: 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full acan

Nutsch: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_lcl.

SS . Surrogate Standard; IS = Internal Standard 50 ng each

<sup>&</sup>quot;Note that 1,3 butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

TO-14A/TO15 GC/MS Volatiles Report Autosampler, 4 Dil. Fact: 1.7 Sample: Philip 197010 Sevenson/Olin 9/11/00 nation off; 500 mL; can 93229 E. of gate to 5970MSD1 Mlec: C.\HPCHEM\1\92000\ Reporting Method: 92000IS 1420169.D File: Limits IS/Surr. ppbv Recovery CAS # R.T. Q ion Area ppbv Compound Cmpd # 50.0 100% 16.10 117.00 1335905 Chiorobenzene-d5 (IS) 0.9 2.20 85.00 14989 ND 75-71-8 2 Dichlorodifluoromethane (12) ND 0.9 0 74-27-3 0.00 52.00 Chioromethane 3 ND 0.9 0.00 0 76-14-2 85.00 1,2- Cl- 1.1,2.2-F ethane (114) 4 ND 0.9 0.00 62.00 0 75-01-4 Vinyl chloride 5 0.9 ND 106-99-0 0.00 54.00 0 1.3-Butadiene 5 0.00 0 ND 0.9 94.00 74-83-9 Bromomethane 7 ND 0.9 0.00 0 75-00-3 64.00 8 Chloroethane 0.00 0 ND 0.9 Trichlorofluoromethane (11) 75-69-4 101.00 8 0.9 75-35-4 0.00 61.00 0 ND 1,1-Dichloroethene 10 0.00 0 ND 0.9 1,1,2- CI 1.2.2- F ethane (113) 76-13-1 151,00 11 0.9 75-09-2 0.00 84.00 0 ND Methylene Chloride 12 0.00 Q ND 0.9 75-34-3 63.00 13 1.1-dictrioroethane ND 0.9 1634-04-4 0.00 0 73.00 Methyl t-butyl ether (MTBE) 14 0.00 0 ND 0.9 156-59-2 61.00 cs-1,2-Dichloroethene 15 299178 43.0 Bromochioromethane (SS) 9.78 130.00 86% 16 ND 0.9 Chloroform 67-66-3 0.00 83.00 0 17 71-55-6 0.00 97.00 0 ND 0.9 1.1.1-Trichloroethane 18 ND 0.9 0.00 0 107-06-2 62.00 19 1.2-Dichloroethane ND 0.9 56-23-5 0 Carbon letrachloride 0.00 117.00 20 24082 71-43-2 11.28 78.00 ND 0.9 21 Benzene 51.9 104% 22 1,4-Diffuorobenzene (SS) 11.83 114.00 1691403 0.9 79-01-6 0.00 0 ND Trichloroethene 130.00 23 0.9 78-87-5 0.00 63.00 0 ND 24 1,2-dichloropropane 0.00 75.00 0 ND 0.9 25 cis-1,3-dichloropropene 542-75-6 1.5 0.9 108-88-3 14.24 91.00 146746 26 Toluene 0.00 75.00 ND 0.9 10051-02-6 O trans-1.3-dichloropropene 27 ND 31090 0.9 1.1.2-Trichloroethane 79-00-5 14,41 97.00 28 0.00 164.00 0 ND 0.9 127-18-4 29 Tetrachloroethene ND 0.9 30 1\_2-Dibromoethane 106-93-4 0.00 107.00 0 108-90-7 16.17 112.00 10142 ND 0.9 31 Chlorobenzena ND 0.9 32 Elhyl benzene 100-41-4 16.72 91.00 45549

ND 0.9 Héxachlorobutadiene 87-68-3 24.56 225.00 12993 Calibration Data: NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv 920\_58.D 920\_100.0 920 20C.D 920\_30C.D Date Printed: 9/26/00 9:54 AM Report: TO-15RPT3\_XLS

16.93

17.46

17.35

17.55

18.00

19.32

19.65

20.06

20.57

20.06

20.55

23.52

91.00

91,00

104.00

83.00

95.00

105.00

105.00

146.00

91.00

146.00

146.00

180.00

92036

42567

12786

17106

700825

40624

87549

24169

16563

24169

21272

18797

ND = Not Detected at the Reporting Limits.

33

34

35

36

37

38

39

40

41

42

43

44

45

m p-Xylene

1,1,2,2-Tetrachloroethane

Bromofluorobenzene (SS)

1,3,5-Trimethylbenzene

1,2,4-Trimethylbenzene

1.3-Dichlorobenzene

1,4-Dichlorobenzene

1.2-Dichlorobenzene

1,2,4-Trichlorobenzene

Benzyl chloride

o-Xylene

Styrene

SS = Surrogate Standard; IS = Internal Standard 50 ng each

NO

ND

ND

ND

48.5

ND

ND

ND

1.5

ND ND

1.2

0.9

0.9

0.9

0.9

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0.9

0.9

0.9

0.9

97%

Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film, direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

1330-20-7

95-47-6

100-42-5

79-34-5

108-67-3

95-63-6

541-73-1

100-44-7

106-46-7

95-50-1

120-82-1

Nutech: -SC Tenax/Anasorb 747 Trap: desorb @ 180C; TO14/15\_lci.

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Dil. Fact: 1.7 Sample: Philip 197010 Sevenson/Olin 9/11/00 Autosampler: 5 nation off; 500 mL; can 9428BB N. of Area B 5970MSD1 Misc: C:\HPCHEM\1\92000\ Reporting 1420170.D Method: 92000IS File: Limits IS/Surr. CAS # R.T. Qion ppby vdaa Recovery Area Cmpd # Compound 16.10 117.00 1531289 50.0 100% Chlorobenzene-d5 (IS) 1 ND 0.8 2.18 18072 Dichlorodifluoromethane (12) 75-71-8 85.00 2 74-87-3 0.00 52.00 0 ND 0.8 3 Chloromethane 0.8 0.00 85.00 ND 76-14-2 0 1.2- CF 1,1,2.2-F ethane (114) 4 0.00 0 ND 0.8 75-01-4 62.00 5 Vinyl chloride 0.00 0.8 6 1,3-Butsdiene 106-99-0 54.00 0 ND 74-83-9 0.00 94.00 0 ND 0.8 7 Bromomethane 75-00-3 0.00 64.00 O ND 0.8 8 Chloroethane 10799 ND 0.8 75-89-4 6.18 101.00 Inchlorofluoromethane (11) 9 1,1-Dichloroethene 75-35-4 0.00 61.00 0 ND 0.8 10 0.00 151.00 0 ND 0.8 1,1,2- Cl 1,2,2- F ethane (113) 76-13-1 11 Methylene Chloride 75-09-2 7.52 84.00 14475 ND 0.8 12 75-34-3 0.00 63.00 0 ND 0.8 1.1-dichloroethane 13 0.00 0 1634-04-4 73.00 ND 8.0 14 Methyl t-butyl ether (MTBE) 15 cis-1,2-Dichloroethene 156-59-2 0.00 61.00 0 ND 0.8 Bromochioromethane (SS) 9.78 130.00 357634 44.8 90% 16 67-66-3 0.00 ND 0.8 17 Chloroform 83.00 0 18 1,1,1-Trichloroethane 71-55-6 0.00 97.00 0 ND 8.0 19 1,2-Dichloroethane 107-06-2 0.00 62.00 0 ND 0.8 20 Carben tetrachloride 56-23-5 0.00 117.00 0 ND 0.8 21 Benzene 71-43-2 11.28 78.00 29403 ND 0.8 1.4-Difluorobenzene (SS) 114,00 1969378 52.7 22 11.83 105% 23 Trichloroethene 79-01-8 0.00 130.00 ND 0 0.8 1.Z-dichloropropane 78-87-5 0.00 ND 24 63.00 0 0.8 542-75-6 0.00 75.00 ND 0.8 25 cis-1,3-dichloropropene 0 26 Toluene 108-88-3 14.24 91.00 188422 1.7 0.8 27 10061-02-6 0 ND 0.8 trans-1,3-dichloropropene 0.00 75.00 28 1.1.2-Trichleroethane 79-00-5 0.00 97.00 0 ND 0.8 29 0.00 0 ND 0.8 Tetrachloroethene 127-18-4 164.00 1.2-Dibromoethane 30 106-93-4 0.00 107.00 Û ND 0.8 31 Chlorobenzene 108-90-7 0.00 112.00 0 ND 0.8 32 Ethyl benzene 100-41-4 16.72 91.00 ND 0.8 39347 ND 33 m.p-Xylene 1330-20-7 16.93 91.00 87688 0.8 34 95-47-8 ND 0.8 o-Xylene 17.46 91.00 35057 35 Styrene 100-42-5 0.00 104.00 0 ND 0.8 36 1.1.2.2-Tetrachloroethane 79-34-5 ND 17.59 83.00 11595 0.8 37 Bromofluorobenzens (SS) 18.00 95.00 834297 50.4 101% 38 1.3.5-Trimethylbenzene 108-87-8 19.32 105.00 ND 0.8 22868 39 1.2.4-Trimethylbenzene 85-63-6 19.87 105.00 ND 0.8 38769 40 1.3-Dichlorobenzene 19.95 ND 0.8 541-73-1 145.00 12498 41 Benzyl chloride 100-44-7 0.00 91.00 ND 0.8 O 42 1.4-Dichlorobenzene 106-46-7 20.07 146.00 16261 ND 0.8 43 1,2-Dichlorobenzene 95-50-1 20.57 146.00 12647 ND 0.8 1.2,4-Trichlorobenzene 44 120-82-1 ND 0.8 23.53 180.00 10425 45 Hexachlorobutadiene 87-68-3 0.00 225.00 8.0 Calibration Data: NIST Traceable Standard Cylinder, Spectra Gases L69236, 1ppmy 920\_5B.D 920\_10D.D 920\_20C.D 920\_30C.D Date Printed: 9/26/00 9:58 AM Report: TO-15RPT3\_XLS

ND = Not Detected at the Reporting Limits

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SP8-1 Fused Silica, 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_ld.

<sup>&</sup>quot;Note that 1.3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Autosampler: 6 Dil. Fact: 3.2 Sample: Philip 197010 Sevenson/Ofin 9/11/00 nation off; 500 mL; can 9605B N. of Soil Pad 5970MSD1 .Misc: Reporting C:\HPCHEM\1\92000\ 1420171.D Method: 92000IS File: Limits IS/Surr. CAS# R.T. vdqq vdqq Recovery Q ion Area Compound Cmpd # 100% 16.11 117.00 1583022 50.0 Chlorobenzens-d5 (IS) 1 ND 1.6 11173 75-71-8 2.20 85.00 Dichlorodifluoromethane (12) 2 0.00 52.00 0 ND 1.6 74-87-3 Chloromethane 3 1.8 0 ND 0.00 78-14-2 85.00 4 1,2- Cl- 1,1,2,2-F ethane (114) 0 ND 1.6 0.00 5 Vinyl chlaride 75-01-4 62.00 1.6 ND 106-98-0 0.00 54,00 0 1.3-Butadiene 6 74-83-9 0.00 94.00 0 ND 1.6 Bromomethane 7 75-00-3 0.00 O ND 1.6 64.00 Chloroethane 8 0 ND 1.6 0.00 75-69-4 101.00 Trichlorofluoromethane (11) 9 O ND 1.6 75-35-4 0.00 61.00 1,1-Dichloroethene 10 ND 0.00 0 1.6 1,1,2- Ci 1,2,2-F ethane (113) 78-13-1 151.00 11 75-09-2 0.00 84.00 O ND 1.6 Methylene Chloride 12 ND 1.8 75-34-3 0.00 0 63.00 1.1-dichloroethane 13 ND 1.6 0.00 73.00 0 14 Methyl t-butyl ether (MTBE) 1634-04-4 156-59-2 0.00 61.00 O ND 1.6 cis-1,2-Dichloroethene 15 9.78 130.00 48.8 98% 401906 Bromochloromethane (SS) 16 ND 1.6 0.00 67-66-3 83.00 O 17 Chloroform ND 1.5 1,1,1-Trichloroethane 71-55-8 0.00 97.00 Ū 18 0.00 0 ND 1.6 1.2-Dichloroethane 107-06-2 62.00 19 ND 1.6 56-23-5 0.00 117.00 Đ 20 Carbon tetrachionide 20285 ND 1.6 71-43-2 11.26 78.00 21 Benzene 11.83 114.00 1634917 42.3 85% 22 1,4-Diffuorobenzene (SS) 0.00 130.00 ND 1.5 23 79-01-8 0 Trichlomethene ND 1.6 78-87-5 0.00 63.00 0 24 1.2-dichloropropane 0.00 0 ND 1.6 75.00 25 cis-1,3-dichloropropene 542-75-6 25 Toluene 108-86-3 14.22 91.00 579073 8.5 1.5 27 10081-02-8 0.00 75.00 0 ND 1.5 trans-1.3-dichloropropene ND 1.6 28 1 1.2-Trichioroethane 79-00-5 14.41 97.00 34690 127-18-4 0.00 164.00 0 ND 1.6 29 Tetrachloroathene ND 1.6 106-93-4 0.00 107.00 0 30 1.2-Dibromoethane ND 1.6 16.21 112.00 10961 31 Chlorobenzene 108-90-7 32 Ethyl benzene 100-41-4 16,71 91.00 60478 ND 1.6 ND 1.6 33 1330-20-7 16.93 91.00 m.p-Xylene 172061 ND 1.6 34 **95**-47-8 17.46 91.00 26859 o-Xylene 35 Styrene 100-42-5 0.00 104.00 0 ND 1.6 17.61 83.00 ND 1.5 36 1,1,2,2-Tetrachioroethane 79-34-5 33740 49.8 37 Bromofluorobenzene (SS) 17.99 95.00 100% 852750 105.00 2.0 1.6 38 1,3,5-Trimethylbenzene 108-67-8 19.31 123215 19.64 105.00 159065 2.7 1.6 39 1.2.4-Trimethylbenzene 95-63-6 40 541-73-1 0.00 146.00 ND 1.6 1.3-Dichlorobenzene 0 2.8 1.5 41 Benzyl chloride 100-44-7 19.84 91.00 21866 42 1,4-Dichlorobenzene 106-45-7 0.00 146.00 O ND 1.6 0.00 ND 1.5 43 1.2-Dichlorobenzene 95-50-1 146.00 0 44 1,2,4-Trichlorobertzene 120-82-1 0.00 180.00 O ND 1.6 ND 1.5 45 Hexachicrobutadiene 87-88-3 0.00 225.00 Calibration Data: NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv 920\_5B.D 920\_10D.D 920\_20C.D 920\_30C.D Date Printed: 9/26/Q0 9:59 AM Report: TO-15RPT3.XLS

ND = Not Detected at the Reporting Limits.

SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica: 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_lci.

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Sample:				A	utosampier. 1	7	Dil. Fact	3.3 <sub>.</sub>
Misc:	nation off; 500 mL; can 93294 S							5970MSD
Method:	92000IS F	ile: C:VHP	CHEM/1/92	2000/	1420172.D		Reporting	
	,						Limits	IS/Sun
Cmpd #	Compound	CAS#	R.T.	Q ion	Area	vđqq	ppbv	Recove
1	Chlorobenzene-d5 (IS)		16.10		1603224	<b>5</b> 0.0		100%
2	Dichlorodifluoromethane (12)	75-71-8	2.23		11838	ND		
3	Chloromethane	74-87-3	0.00		0	ND		
4	1.2- CF 1,1,2,2-F ethane (114)	76-14-2	0.00		0	ND		
5	Vinyl chloride	75-01-4	0.00	62.00	. 0	ND	1.7	
៩	1.3-Butadiene	106-99-0	0.00	54.00	0	ON	1.7	
7	Bromomethane	74-83-9	0.00	94.00	. 0	ND	1,7	
8	Chloroethane	75-00-3	0.00	84.00	0	, ND	1.7	•
9	Trichlorofluoromethane (11)	75-6 <del>9-4</del>	0.00	101.00	0	ND	1.7	
10	1,1-Dichloroethene	75-35-4	0.00	61.00	0	- ND	1.7	
11	1.1.2- Cl 1.2.2- F ethane (113)	76-13-1	0.00	151.00	. 0	ND	1.7	
12	Methylene Chloride	75-09-2	7.52	84.00	15836	ND	1.7	
13	1,1-dichloroethane	75-34-3	0.00	63.00	0	ND	1.7	
14	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00	0	ND	1.7	
15	cis-1.2-Dichloroethene	158-59-2	0.00	61.00	. 0	ND	1.7	
16	Bromochloromethane (SS)		9.78	130.00	380471	45.6	•••	91%
17	Chloroform	67-86-3	0.00	83.00	300471	ND	1.7	J 170
18	1,1,1-Trichleroethane	71-55-6	0.00	97.00	0	dא	1.7	
19	1,2-Dichloroethane	107-06-2	0.00		_	ND	1.7	
	Carbon tetrachloride			62.00	0			
20	Benzene	56-23-5	0.00	117.00	0	ND	1.7	
21		71-43-2	11.28	78.00	10593	ND	1.7	
22	1.4-Diffuorobenzene (SS)	****	11.83	114.00	1752830	44.8		90%
23	Trichloroethene	79-01-6	0.00	130.00	. 0	NO	1.7	
24	1,2-dichloropropane	78-87-5	0.00	63.00	0	ND	1.7	
	cis-1,3-dichloropropene	542-75-6	0.00	75.00	0	ND	1.7	
	Toluene	108-88-3	14.27	91.00	85833	ND	1.7	
	trans-1.3-dichloropropene	10061-02-6	0.00	75.00	0	ND	1.7	
	1,1,2-Trichloroethane	79-00-5	0.00	97.00	0	ND	1.7	
	Tetrachloroethene	127-18-4	0.00	164.00	0	ND	1.7	
·	1,2-Dibromoethane	106-93-4	0.00	107.00	O	מא	1,7	
	Chlorobenzene	108-90-7	0.00	112.00	0	ND	1.7	
	Ethyl benzene	100-41-4	16.72	91.00	14514	ND	1.7	
	mip-Xylene	1330-20-7	16.94	91.00	35208	ND	1.7	
	o-Xyiene	95-47-6	17.47	91.00	15444	ND	1.7	
	Styrene	100-42-5	0.00	104.00	, O	ND	1.7	
38	1.1.2.2-Tetrachtoroethane	79-34-5	0.00	83.00	0	NO	1.7	,
37 1	3romoffuorobenzene (SS)		18.00	95.00	853589	49.2		98%
38 .	.3.5-Trimethylbenzene	108-67-8	19.34	105.00	10122	ND	1.7	
39 .	1,2,4-Trimethylbenzene	95-63-6	19.87	105.00	14080	ND	1.7	
	3-Dichlorobenzene	541-73-1	0.00	146.00	0	ND	1.7	
	Benzyl chloride	100-44-7	0.00	91.00	ō	ND	1.7	
	.4-Dichlorobenzene	106-46-7	0.00	146.00	ō	ND	1.7	
	2-Dichlorobenzene	95-50-1	0.00	146.00	Ō	ND	1.7	
	.2.4-Trichlorobenzene	120-82-1	0.00	180.00	Ö	NO	1.7	
	lexachlorobutadiene	87-38-3	0.00	225.00	0	ND	1.7	
*****		ceable Standard					- 1 -	
	20_58.D 920_100.D	920_20C.D				30C.D		
•	! ** <del>-</del>	0 10:01 AM	Report: T	m econom				

ND = Not Detected at the Reporting Limits. SS = Surrogate Standard; IS = Internal Standard 50 ng each CollSPB-1 Fused Silics; 30m x 0.25mm, 0.25m film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan Nutsch: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_kq.

<sup>&</sup>quot;Note that 1.3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Sample:			Aı	DII. Fact: 1.9				
Misc:	nation off; 500 mL; can A305 E.		51 1 <b>-2</b> 1 11 11 11		_		. 1045	5970MSC
Wethod:	92000IS A304 F	ile: C:VHPC	CHEM/1/92	1000/	1420173.D		Reporting	1ett erm
					_		Umits	IS/Sur
Cmpd #	. Compound	CAS#	R.Y.	Q lon	Area	ppv	bbpA	Recove
1	Chlorobenzene-d5 (IS)		16.12	117.00	1605235	50.0		100%
2	Dichlorodifluoromethane (12)	75-71-8	2.20	85.00	17525	ND	0.9	
3	Chloromethane	74-87-3	0.00	52.00	0	ND	0.9	
4	1,2- CF 1,1,2.2-F ethane (114)	78-14-2	0.00	85:00	0	ND	0.9	
5	Vinyl chlorids	75-01-4	0.00	62_00	0	סא	0.8	
5	1,3-Butadiene	106-99-0	0.00	54.00	0	ND	0. <del>9</del>	
7	Bromomethane	74-83-9	0.00	94.00	. 0	ND	0.9	
8	Chloroethane	75-00-3	0.00	64.00	.0	ND	0.9	•
9	Trichlorofluoromethana (11)	75-59-4	6.18	101.00	10344	ND	0.9	
10	1,1-Dichloroethene	75-35-4	6.99	61.00	13700	ND	0.9	
11	1,1,2- Cl 1,2,2-F ethane (113)	76-13-1	0.00	151.00	0	ND	6.9	
12	Methylene Chloride ,	75-09-2	7.52	84.00	14004	ND	0.9	
13	1.1-dichloroethane	75-34-3	0.00	63.00	0	סא	0.9	
14	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00	Ò	ND	0.9	
15	cis-1.2-Dichlomethene	156-59-2	0.00	61.00	0	ND	0.9	
16	Bromochloromethane (SS)		9.78	130.00	413588	49.5		99%
17	Chloroform	67-66-3	0.00	83.00	0	ND	0.8	****
18	1,1,1-Trichloroethane	71-55-6	0.00	97.00	o	ND	0.9	
19	1,2-Dichloroethane	107-06-2	0.00	62.00	Ö	ND	0.9	
20	Carbon tetrachloride	58-23-5	0.00	117.00	C	DN	0.9	
	Benzene	71-43-2	11.28	78.00	14013	ND	0.9	
	— : ·	11-43-4	11.85				0.5	028/
	1.4-Diffuorobertzene (SS)	700 O C		114.00	1801899	46.0	0.0	92%
	Trichloroethene	79-01-6	0.00	130.00	0	ND	0.9	
24	1,2-dichloropropane	78-87-5	0.00	83.00	0	ND	0.9	
	cis-1,3-dichloropropene	542-75-6	0.00	75.00	0	ND	0.9	
	Toluene	108-88-3	14.28	91.00	124358	1.2	0.9	
	trans-1,3-dichloropropene	10061-02-6	0.00	75.00	0	ND	0.9	
	1.1,2-Trichloroethane	79-00-5	0.00	97.00	0	ND	0.9	
	Tetrachloroethene	127-18-4	0.00	164.00	0	ND	0.9	
	1.2-Dibromoethane	106-93-4	0.00	107.00	O	DA	0.9	
	Chloroberizene	108-90-7	18.17	112.00	10100	ND	0.9	
	Ethyl benzene	100-41-4	16.74	<b>9</b> 1.00	25758	ND	0.9	
	m.p-Xylene	1330-20-7	16.93	91.00	58026	ND	0.9	
34 (	o-Xylene	<del>95-4</del> 7-6	17.48	91,00	24339	ND	0.9	
35 5	Styrene	100-42-5	17.37	104.00	14623	ND	0.9	
38 1	1,1.2,2-Tetrachicroethane	79-34-5	17.58	83.00	15445	ND	0.9	
37	Bromofluorobenzene (SS)		18.01	95.00	823473	47.4		85%
	1,3,5-Trimethyfbenzene	108-67-8	19.34	105.00	25424	NO	0.9	
	1,2,4-Trimethylbenzene	<b>95-63-8</b>	19.87	105.00	32234	ND	0.9	
	3-Dichlorobenzene	541-73-1	19.96	146.00	19725	ND	0.9	
	Senzyl chloride	100-44-7	0.00	91.00	0	ND	0.9	
	l,4-Dichlorobenzana	106-46-7	20.08	146.00	19940	ND	0.9	
	1,2-Dichlorobenzene	95-50-1	20.57	146.00	21271	ND	0.9	
	,2,4-Trichiorobenzene	120-82-1	23.55	180.00	17035	1.0	0.9	
		87-68-3	23.33 24.57	225.00	18362	1.0	0.9	
***************************************		ceable Standard				Anna	¥.J	
	1		. Cymicer.	-herra c		- '		
8	720_58.D 920_10D D	920_20C.D			831	0_30C.D		

ND = Not/Detected at the Reporting Limits. SS = Surrogate Standard; IS = Internal Standard 50 ng each

Col:SPB-1 Fused Silica; 30m x 0 25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutech: -5C Tenax/Anasorb 747 Trap: desorb @ 180C; TO14/15\_kci.

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Samole:	Philip 197010 Sevenson/Olin (	7/13/00		A	utosampler: \$	)	Dil. Fact:	3.6
Misc:	nation off; 500 mL; can 9334B				·		5970MS	
Method:	f		PCHEM11/920001 1		1420174.D	• •	Reporting	
10.000.00-1	<del>- 1</del>						Limits	IS/Surr.
Cmpd #	Campound	CAS #	R.T.	Q lon	Area	ppbv	ppbv	Recovery
1	Chlorobenzene-d5 (IS)	· · · · · · · · · · · · · · · · · · ·	16.11	117.00		50.0		100%
2	Dichlorodifluoromethane (12)	75-71-8	2.22	85.00	10307	ND	1.8	
3	Chloromethane	74-87-3	0.00	52.00	Q	ND	1.8	
4	1,2- Cl- 1,1,2,2-F ethane (114)		0.00		Ö	ND	1.8	
5	Vinyl chloride	75-01-4	0.00	62.00	ō	NO	1.8	
8	1,3-Butadiene	106-99-0	0.00	54.00	ō	ND	1.8	
7	Bromomethane	74-83-9	0.00	94.00	0	ND	1.8	
8	Chloroethane	75-00-3	0.00	64.00	. 0	ND	1.8	
9	Trichloroflueromethane (11)	75-69-4	0.00	101.00	ä	ND	1.8	
10	1,1-Dichloroethene	75-35-4	0.00	61.00	ō	ND	1.8	
11	1.1.2- Cl 1,2.2-F ethane (113)	76-13-1	0.00	151.00	Ö	ND	1.8	
12	Methylene Chloride	75-09-2	7.50	84.00	23153	ND	1.8	
13	1,1-dichloroethane	75-34-3	0.00	63.00	0	NO	1.8	
14	Methyl t-butyl ether (MTBE)	1634-04-4	9.42	73.00	14031	ND	1.8	
	cis-1,2-Dichloroethene	156-59-2	0.00	61.00	0	ND	1.8	
15	· · · · · · · · · · · · · · · · · · ·	150-56-2	9.78			48.0	1.0	0/29/
16	Bromochloromethane (SS)	A = C = 0	0.00	130.00	397192	46.0 ND	1.8	96%
17	Chloroform	67-66-3		83.00	Ö	ND	1.8	
18	1.1.1-Trichloroethane	71-55-6	0.00	97.00	0		1.8 1.8	
19	1,2-Dichlorosthane	107-06-2	0.00	62.00	0	ND		
20	Carbon tetrachloride	56-23-5	0.00	117.00	0	ND	1.8	
21	Benzene	71-43-2	11.28	78.00	11976	ND	1.8	
22	1,4-Difluorobenzene (SS)		11.85	114.00	1705238	43.9		88%
	Trichloroethene	79-01-6	0.00	130.00	0	ND	1.8	
	1,2-dichloropropane	78-87-5	0.00	63.00	0	ND	1.8	
	cis-1,3-dichloropropene	542-75-6	13.09	75.00	17716	ND	1.8	
	Toluene	108-88-3	14.22	91.00	402432	7.3	1.8	
	trans-1,3-dichloropropene	10051-02-6	0.00	75.00	Ö	ND	1.8	
	1,1,2-Trichloroethane	79-00-5	0.00	97.00	0	ND	1.8	
	Tetrachioroethene	127-18-4	0.00	164.00	0	ND	1.8	
	1,2-Dibromoethane	106-93-4	0.00	107.00	٥	ND	1.8	
	Chlorobenzene	108-90-7	0.00	112.00	0	ND	1.8	
	Ethyf benzene	100-41-4	16.70	91.00	27998	ND	1.8	
	m.p-Xylene	1330-20-7	16.93	91.00	57316	ND	18	
	o-Xylene	95-47-6	17.48	91.00	20490	ND	1.8	
	Styrene	100-42-5	0.00	104.00	0	ND	1.8	
38	1,1.2.2-Tetrachioroethane	79-34-5	0.00	83.00	0	סא	1.8	
37	Bromofluoroberatene (SS)	,	17.99	95.DO	826541	48.1		96%
	1,3,5-Trimethylbenzene	108-67-8	19.31	105.00	14084	ND	1.8	
	1.2.4-Tomethylbenzene	<b>95-63-6</b>	19.85	105.00	23880	ND	1.8	
	1,3-Dichlorobenzene	541-73-1	0.00	146.00	O	ND	1.8	
	Serzyl Chloride	100-44-7	20.57	91.00	13947	2.0	1.8	
	1.4-Dichlorobenzene	105-45-7	0.00	146.00	Q	ND	1.8	
	1.2-Dichlorobenzene	95-50-1	0.00	146.00	O	NO	1.8	
	1,2,4-Trichloroberizene	120-82-1	DQ.0	180.00	0	ND	1.8	
	dexachlorobutadiene	· 87-68-3	0.00	225.00	0	ַ סא	1.8	
	Cationation Data: NIST T	raceable Standar	d Cylinder:	Spectra C	Sases L69236.	1ppmv		
8	920_58.D 920_100.D	920_20C.D			920	2.30C.D		
	Date Printed: 9/26	700 10:03 AM	Report: T	O-15RPT	3.XLS			

NO = Not Detected at the Reporting Limits. SS = Surrogate Standard; IS = Internal Standard 50 ng each Col:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan Nutech; -5C Tenax/Anasorb 747 Trap; desorb @ 180C: TO14/15\_kc.

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

TOTAL P.02

Research Triangle Park Laboratories, Inc 8100 Brownleigh Drive, Suite 120 Raieigh, North Carolina 27617 (new zipcode) Phone: 919-510-0228 Fax: 919-510-0141 Web Site: www.rtp-labs.com

# Chain of Custody Record

ISO 17025 Compliant for Testing Labs



Swenson Engineening	mtal		ojeci Managar		Nurr		454	6/81	F 11	8 Numi 57 (	964	Date: 9/10/00	
Addiesa C/s Olin Corp @		۔۔۔۔۔ ک کع	7				१८ पाउ				1	Page	
City Wilmington	51a	į a	Zip Code 		P							RTP Labs Proj. Trac	king No.:
Contract@urchase Order No.: Project	l Name:			ervatives	ה	ررا الا	20					197010	
Sample ID No. and Description	Olin R. Dale	rved Time	Mairlx Air, Lig. Soild	Preserva	# of Container	+ +	7					Comments	Fraction
93020 Swdrum ArenA	9-11-01	1700	Air										
93229 Fast of gate to bioce		 		<u> </u>				·					
9428BB North of Area B	L					\	$V_{\perp}$						
9605B Noth of Soil ped	9-11-00	1700			<u> </u>		<u> </u>						
93294 SwafdenAres A	9-13-02	1830				/	/\						
4304 Fast of Fristgalet B		<u> </u>		<u> </u>						 			
9334B North of Scilpad	_ Ju/	1	\ \ \ \										
12256 North of Arey 13	7-13 4	1530	AI			<u>/</u>	_   _ \	V		.]			
					<u> </u>	_		<u> </u>					
		.]			_			_					
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Turn Around Time Requested for Report; Busin  1 day (4x) 2 days (3x) 3 days (2x)				578			k: Std Ic Deliv						oncentrellone;
Relinquished By:		Dale	: , Ylm		R	esetve	d By:	^				Dste:	Thme:
Reilinguished By:    Lia Fel Frances A	schol 1	Date	•	<b>%</b> ;		ecalve	d By:	Des	be	ريه	En	alik 920-a	Thms: 2 10:00 P



#### INDUSTRIAL HYGIENE

#### **ENVIRONMENTAL TESTING**

• EPA/NVLAP 101262-0

+ AIHA ACCREDITATION NO. 100439

• NY DOH 10903 • PA DER 06-353 • NJ DEP 77678

#### ANALYTICAL REPORT

Client:

Sevenson Environmental Services, Inc.

Project:

197236

Report to: Adam Hibbard

Received:

28-SEP-00

Sevenson Environmental Services, Inc.

Reported:

11-0CT-00

51 Eames Street

Willimington MA 01887

Project Description:

Olin Remediation: Summas

TO-15 & Lib. Search

Sampled: 18-SEP-00 17:15

RESULT

UNITS

METHOD

DATE

ANALYST

93254 SW of drum Area A

Lab Sample: 1421096

See Attached Report

93120 East of first gate to bio cell

Lab Sample: 1421097

See Attached Report

12533 North of concrete soil pond

Lab Sample: 1421098

See Attached Report

93047 North of Area B

Lab Sample: 1421099

See Attached Report

Indicates less than the limit of quantitation.

8100 Brownleigh Drive, Suite 120 Raleigh NC 27617



919 \$10-0228 Telephone

919 510-0141 Fax

Web Site: www.rtp-lahs.com

#### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin

Project No: 197010

Sample Date: 9/11/2000 Analysis Date: 9/25/2000

Matrix: Air in Summa Canister

Date Received: 9/20/2000

Sample ID:

1420171 canister 9605B "North of Soil Pad"

Сотроина	Estimated ppbv*	
2.4.4-trimethyl-1-pentene	35	•
2,3,4-trimethyl pentane	25	•
1-cthyl-3-methyl benzene	12	
1,1,2,3-tetramethyl cyclohexane	12	
1-ethyl-2,2,6-trimethylcyclohexane	11	
4-ethyl-1,2-dimethyl benzene	14	
i-ethyl-2,3-dimethyl benzene	11	
1,2,3,4,5-tetramethyl benzene	<b>i8</b>	
decallydro-2-methyl naphthalene	17	
2,6-dimethyl undecane	58	
2-butyl-1.1,3-trimethyl cyclohexane	12	
7-methyl tridecane	49	
į		

Sample Date: 9/13/2000

Sample ID:

1420172 canister 93294 "South West of Drum Area A"

Compound

Estimated poby\*

No TICs found

Sample Date:

9/13/2000

Sample ID:

1420173 canister A304 "East of First Gate to BC"

Compound

Estimated ppbv\*

No TICs found

File: 197010.doc/als

<sup>\*</sup>Estimated values were calculated against the  $d_3$ -Chlorobenzene internal standard assuming a 1:1 response ratio

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Weh Site: www.rtp-labs.com 919 510-0141 Fax

#### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin

Project No: 197010

Sample Date: 9411/2000 9(13/00)

Matrix: Air in Summa Canister

Analysis Date: 9/25/2000

Date Received: 9/20/2000

Sample ID:

1420174 canister 9334B"North of Soil Pad"

Compound	Estimated ppbv*	
Butanoic acid, ethyl ester	92	•
Acetic acid, butyl ester	11	
Butanoic acid, propyl ester	.56	
Pentanoic acid, cthyl ester	33	
2-methyl-proponoic acid, butyl ester	19	
Hexanoic acid, ethyl ester	30	

Sample ID:

1420175 canister 12256 "North of Area B"

Compound

Estimated ppbv\*

No TICs found

File: 197010.doc/als

<sup>\*</sup>Estimated values were calculated against the  $d_3$ -Chlorobeazene internal standard assuming a 1:1 response ratio.

Sample:	Philip 197010 Şəvənson/Olin 9/1	3/00		A	utosampler: '	10	Dil. Fact	1.7	
Misc:	netion off 500 ml can 9334R N	. of Area B					5970MSD		
Method:	・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・	He: C:VHPC	HEM\1\92	1000\	1420175.D		Reporting		
							<b>Limits</b>	IS/Su:	
Cmpd #	Compound	CAS#	R.T.	Q ion	Area	ppbv	ppbv	Recove	
4	Chlorobenzene-d5 (IS)	,	16.10	117.00	1602080	50.0		100%	
2	Dichlorodifluoromethane (12)	75-71-8	2.18	85.00	18141	ND	0.9		
3	Chloromethane	74-87-3	0.00	52.00	0	ND	0.9		
4	1.2- CI- 1.1.2.2-F ethane (114)	76-14-2	0.00	85.00	o	ND	0.9		
5	Vinyl chloride	75-01-4	0.00	62.00	O	ND	0.9		
6	1.3-Butadiene	106-99-0	0.00	54.00	0	ND	0.9		
7	Stomomethane	74-83-9	0.00	94.00	Ö	ND	0.9		
8	Chloroethane	75-00-3	0.00	64.00	0	ND	0.9		
8	Trichlorofluoromethane (11)	75-69-4	0.00	101.00	O	ND	0.9		
10	1,1-Dichloroethene	75-35-4	0.00	81.00	Ō	DM	0.9		
11	1,1,2- Cl 1,2,2- F ethane (113)	76-13-1	0.00	151.00	. 0	ND	0.9		
12	Manager Janeary Obligation	75-09-2	7.50	84.00	13936	ND	0.9		
13	1,1-dichloroethane	75-34-3	0.00	63.00	0	ND	0.9		
14	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00	o	ND	0.9		
	cis-1,2-Dichloroethene	158-59-2	0.00	61.00	O	ND	0.9		
15	· · · · · · · · · · · · · · · · · · ·	100-08-2	9.78	130.00	405855	48.6	0.0	97%	
16	Bromochloromethane (SS)	C7 60 3			#U2635 0	ND	0.9	31 /4	
17	Chloroform	67-68-3	0.00	83.00	•	אם מא	0.9		
18	1,1,1-Trichloroethane	71-55-6	0.00	97.00	0	ND	0.9		
19	1_2-Dichloroethane	107-06-2	0.00	62.00	0				
20	Carbon tetrachloride	56-23-5	0.00	117.00	0	ND	9.0		
21	Benzene	71-43-2	11.28	78.00	14046	ND	0.9		
22	1.4-Difluerobenzene (SS)		11.83	114.00	2046544	5Z.3		105%	
23	Trichloroethene	79-01-6	0.00	130.00	0	ND	0.9		
24	1,2-dichloropropane	78-87-5	0.00	63.00	0	ND	0.9		
25	cis-1,3-dichloropropene	542-75-8	0.00	75.00	0	ND	0.9		
26	Toluene	108-88-3	14.24	91.00	225620	2.0	0.9		
27	trans-1,3-dichloropropene	10061-02-6	0.00	75.00	0	ND	0.9		
28	1.1.2-Trichloroethane	79-00-5	13.68	97.00	12100	ND	0.9		
28	Tetrachioroethene	127-18-4	0.00	164.00	0	ND	0.9		
30	1,2-Dibromoethane	106-93-4	0.00	107.00	0	ND	0.9		
31	Chlorobenzene	108-90-7	0.00	112.00	0	ND	0.9		
	Ethyl berzene	100-41-4	18.72	91.00	19591	סא	0.9		
	m.p-Xylerre	1330-20-7	16,94	91.00	42177	ND	0.9		
34	o-Xylene	95-47-8	17.46	91.00	15917	ND	0.9		
35	Styrene	100-42-5	0.00	104.00	О	DN	0.9		
36	1_1,2,2-Tetrachioroethane	79-34-5	0.00	83.00	O	ND	0.9		
37	Bromofluorobenzene (SS)		18.00	95.00	843508	48.7		97%	
38	1,3,5-Trimethylbenzene	108-67-8	0.00	105.00	0	ND	0.9		
39	1,2,4-Trimethylbenzene	95-33-8	19.87	105.00	13444	ND	0.9		
40	1,3-Dichlorobenzene	541-73-1	20.07	148.00	10525	ND	0.9		
	Bénzyl chloride	100-44-7	20.52	91.00	11329	ND	0.9		
42	1,4-Dichlorobenzene	106-46-7	20.07	146.00	10525	ND	0.9		
43	1,2-Dichlorobenzene	95- <del>5</del> 0-1	0.00	146.00	0	ND	0.9		
44	1.2.4-Trichlorobenzene	120-82-1	0.00	180.00	0	ND	0.9		
45	Hexachiorobutadiene	87-88-3	0.00	225.00	0	ND	0.9		
i	Calibration Data: NIST Tra	ceable Standard	Cylinder:	Spectra (	3ases L69236	. 1ppmv			
:	920_58.0 920_100.0	920_20C.D			92	0_30C.D			
	·	X 10:32 AM	Report: T	O-15RPT		_			

ND = Not Detected at the Reporting Limits. | SS = Surrogate Standard; IS = Internal Standard 50 ng each Cot:SPB-1 Fused Silics; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_ld.

<sup>&</sup>quot;Note that 1.3-butadiens and MTBE are TO-15 compounds only and not TO-14 targets."

8100 Brownleigh Drive, Suite 120 Raleigh, NC 27617



919 \$10-0228 Telephone 919 \$10-0141 Fax

Web Site: www.rtp-labs.com

# TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin

Project No: 197010

Sample Date: 9/11/2000 Analysis Date: 9/25/2000 Matrix: Air in Summa Canister

Date Received: 9/20/2000

Sample ID:

1420168 canister 93020 "SW of drum Area A"

Compound ,	Estimated ppbv*	
4.6-dimethyl dodecane	53	
4-methyl decane	32	
2,6,10-trimethyl dodecane	501	•
Nonadecane	110	
Tetradecane		
1	155	
Pentadecane	123	
Sample ID: 1420169 canister	93229 "East of first gate to Biocell"	
Compound	Estimated ppbv*	
4,6-dimethyl dodecane	11	
Heneicosanc	6	
2,6,11,15-tetramethyl hexadecane	6	
2,6,10-trimethyl dodecane	18	
Sample ID: 1420170 canister 9	9428BB "North of Area B"	
Compound	Estimated ppbv*	
2.6,10-trimethyl dodecane	6	

<sup>\*</sup>Estimated values were calculated against the  $d_f$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

File: 197010.doc/als

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TO-14A/TO15 GC/MS Volatiles Report

Sample:	Philip 197236 Sevenson/Olin I	00/81/0		A	utosampler: 1	1	Dil. Fact	
Misc:	nafion off; 500mL; SW of Drun	n Area A						5970MSD1
Method:	· · · · · · · · · · · · · · · · · · ·		CHEM/1/92	10001	1421096.D		Reporting	
	i						Limits	15/5urr.
Cmpd #	Compound	CAS#	R.T.	Q lon	Anta	ppby	ydaq	Recovery
1	Chiorobenzene-d5 (IS)		16.09	117.00	1013167	50.0		100%
2	Dichlorodifluoromethane (12)	75-71-8	0.00	85.00	0	ND	1.6	:
3	Chigromethane	74-87-3	0.00	52.00	0	ND	1.6	
4	1,2-'Cl- 1,1,2,2-F ethane (114)	_	0.00	85.00	0	ND	1.5	
5	Vinyl chloride	75-01-4	0.00	62.00	0	ND	1.6	
6	1.3-Butadiene	106-99-0	. 0.00	54.00	0	ND	1.6	
7	Bromomethane	74-83-9	0.00	94:00	σ	DN	1.6	
8	Chloroethane	75-00-3	0.00	64.00	0	ND	1.6	
8	Trichiorofluoromethane (11)	75-89-4	0.00	101.00	0	ND	1.6	
10	1,1-Dichloroethene	75-35-4	0.00	61.00	Ö	ND	1.6	
11	1,1,2- Cl 1,2,2- F ethane (113)	76-13-1	0.00	151.00	O	ND	1.6	
12	Methylene Chloride	75-09-2	0.00	84.00	0	ND	1.6	•
13	1.1-dichloroethane	75-34-3	0.00	63.00	0	ND	1.6	
14	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00	0	ND	1.6	
15	cis-1,2-Dichloroethene	158-59-2	0.00	61.00	0	ND	1.6	
16	Bromochloromethane (SS)	,	9.78	130.00	267655	50.7		101%
17	Chloroform	<b>67-66-3</b>	0.00	83.00	0	ND	1.6	
18	1,1,1-Trichloroethane	71-55-6	0.00	97.00	0	ND	1.6	•
19	1,2-Dichloroethane	107-06-2	0.00	62.00	0	ND	1.6	
20	Cartion tetrachloride	56-23-5	0.00	117.00	0	ND	1.5	
21	Benzene	71-43-2	0.00	78.00	0	ND	1.6	
22	1,4-Diffuorobenzene (SS)	•	11.83	114.00	1077650	43.6		87%
	Trichloroethene	79-01-6	0.00	130.00	0	ND	1.6	
	1,2-dichloropropane	78-87-5	0.00	63.00	0	ND	1.6	
	cis-1,3-dichloropropene	542-75-6	0.00	75.00	. 0	DM	1.6	
	Toluene	108-88-3	14.24	91.00	48830	ND	1.6	
	trans-1,3-dichloropropene	10061-02-6	0.00	75.00	O	ND	1.6	
	1.1,2-Trichloroethane	79-00-5	0.00	97.00	0	DM	1.6	
	Tetrachloroethene	127-18-4	15.37	164.00	301454	20.8	1.6	
	1,2-Dibromoethane	106-93-4	0.00	107.00	O	ND	1.8	
	Chiorobenzene	108-90-7	0.00	112.00	Ō	an	1. <del>6</del>	
	Ethyl benzene	100-41-4	16.70	91.00	24529	ND	1.5	
	m.p-Xylene	1330-20-7	18,91	91.00	74552	ND	1.5	
	o-Xyjene	95-47-6	17.44	91.00	24141	ND	1.6	
	Styrene	100-42-5	0.00	104.00	0	ND	1.6	
	1.1.2.2-Tetrachloroethane	79-34-5	0.00	83.00	Ö	ND	1.6	
	Bromofluorobenzene (SS)	•	17.99	95.00	476496	43.5		87%
	1,3,5-Trimethylbenzene	108-87-8	19.13	105.00	14748	ND	1.6	
	1,2.4-Trimethylbenzene	95-53-6	19.85	105.00	14175	ND	1.6	
	1,3-Dichlorobenzene	541-73-1	0.00	148.00	0	ND	1.6	
	Benzyl chloride	100-44-7	20.57	91.00	13264	2.6	1.6	
	1.4-Dichlorobenzene	106-46-7	0.00	146.00	O	ND	1.6	•
	1,2-Dichlorobenzene	95-50-1	0.00	146.00	0	ND	1.6	
	e e é Trimbinantinamen	120-82-1	0.00	180.00	0	ND	1.5	
45	1,2,4-Trichlorobenzene							
	Hexachlorobutadiene	67-68-3	0.00	225.00	0	DM	1.8	
• (	Hexachlorobutadiene			***************************************	Gases L69236,	1ppmv ·	1.8	·
	Hexachlorobutadiene	67-68-3		Spectra G	Gases L69236, 920		1.8	<del></del>

ND = Not Detected at the Reporting Limits. SS = Surrogate Standard; IS = Internal Standard 50 ng each Cot:SPB-1 Fused Silica; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 smu full scan Nutech; -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_kd.

<sup>&</sup>quot;"Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

	Philip 197236 Sevenson/Olin			<u>m</u>	utosampler: 1		Dil. Fact	
	nation off: 500mL; E. of 1st ga		m! IS	T. 470. 470. 470. 6				5970MSC
Hethod:	92000IS	File: C:VHP	CHEMI1193	\$000/	1421097.D		Reporting	
	_						Limits	IS/Sur
Cmpd#	: Compound	CAS #	R.T.	Q ion	Area	ppbv	bbpA	Recove
	Chlorobenzene-d5 (IS)		16.10			50.0		100%
	Dichlorodifluororaethane (12)	75-71-8	2.15	85 00	12037	ND		•
	Chloromethane	74-87-3	0.00	52.00	0	ND		
	1,2-CL 1.1,2.2-F elhane (114)		0.00	85.00	0	ND	1.3	
5	Vinyl chloride	75-01-4	0.00	62.00	Q	ND	1.3	
6	1,3-Butadiene	106-96-0	0.00	54.00	0	ND	1.3	
7	Bromomethane	74-83-9	0.00	94.00	. 0	מא	1.3	
8	Chloroethane	75-00-3	0.00	64.00	0	ND		
8 .	Trichiorofluoromethane (11)	75-69-4	0.00	101.00	O	ND	1.3	
10	1.1-Dichloroethene	75-35-4	0.00	61.00	0	.NO	1.3	
	1,1,2- Cl 1,2,2- F ethane (113)	76-13-1	0.00	151.00	. 0	ND	1.3	
12	Methylene Chloride	75-09-2	0.00	84.00	0	ND	1.3	
13	1.1-dichloroethane	75-34-3	0.00	63,00	0	OM	1.3	
14	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00	O	ND	1.3	
	cis-1,2-Dichloroethene	156-59-2	0.00	61.00	0	ND	1.3	
	Bromochloromethane (SS)		9.78	130.00	254248	54.5		109%
	Chloroform	67-66-3	0.00	83.00	0	ND	1.3	
	1.1,1-Trichloroethane	71-55-6	0.00	97.00	Ö	NO	1.3	
	1.2-Dichioroethane	107-06-2	0.00	62.00	ō	ND	1.3	
	Carbon tetrachloride	56-23-5	0.00	117.00	ő	סא	1.3	
	Benzene	71-43-2	0.00	78.00	Ô	מא	1.3	
	1,4-Difluorabenzene (SS)	/ 1	11.83	114.00	1014433	46.4	.,0	93%
	Frichloroethene	79-01-6	0.00	130.00	1014433	DN D	1.3	3070
	,2-dichloropropane	78-87-5	0.00	63.00	0	ND	1.3	
	xis-1,3-dichloropropene	542-75-6	0.00	75.00	0	סא	1.3	
	Toluene	108-88-3	14.26	91.00	55015	ND	1.3	
	rans-1.3-dichloropropene	10061-02-6	0.00	75.00	05015	ND DN	1.3	
	,1,2-Trichlomethane	79-00-5	0.00	97.00	o o	סא	1.3	
	etrachioroethene	127-18-4	15.38	164.00	100647	6.6	1.3	
	.2-Dibromoethane	106-93-4	0.00	107.00		ND	1.3	
	hlorobenzene		0.00		0	ON	1.3	
		108-90-7		112.00	0		1.3	•
	ihyl berzene 1.p-Xylene	100-41-4	16.72 16.92	91.00 91.00	13251	ND ND	1.3	
	-Xylene	1330-20-7 95 <del>-4</del> 7-6	17.45	91.00	41098	ND	1.3	
	~ · ·				14148			
	tyrene	100-42-5	0.00	104.00	0	ND	1.3	
	.1.2.2-Tetrachloroethane	7 <del>9</del> -34-5	0.00	83.00	0	ND	1.3	<u></u>
	ramofluorobenzene (SS)	- سد حدوري	17 98	95.00	421560	43.6		87%
	,3,5-Trimethylbenzene	108-67-8	19.13	105.00	16127	ND	1.3	
	2.4-Trimethylberizene	95-63-6	19.85	105.00	15654	ND	1.3	
	3-Dichlorobenzene	541-73-1	0.08	146.00	0	ND	1.3	
	enzyl chloride	100-44-7	0.00	91.00	0	ND	1.3	
	4-Dichlorobenzene	106-46-7	0.00	146.00	0	ND	1.3	•
	2-Dichlorobenzene	95-50-1	0.00	146.00	. 0	ND	1.3	
44 1.	2.4-Trichlorobenzene	120-82-1	0.00	180.00	0	ND	1.3	
45 He	exachlorobutadiene	87 <del>-68-</del> 3	0.00	225.00	0 .	ND	1.3	

ND = Not Detected at the Reporting Limits. SS = Surrogate Standard; IS = Internal Standard 50 ng each Col:SPB-1 Fused Silica; 30m x 0.25mm, 0 25u film; direct interface, -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutsch: -5C Tenax/Anssorb 747 Trap. desorb @ 180C; TO14/15\_lci.

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets "

Sample:	Philip 197236 Sevenson/Olin S	V18/00		A	utosampier: 1	13	Dil. Fact:	1.7
Misc:	nafion off; 500mL: N. of Conce	ete soil Pad						6970MSD
Wethod:	92000IS	File: C:WPO	CHEM119:	2000/	1421098.D	٠	Reporting	
							Limits	IS/Sur
Cmpd #	Compound	CAS#	R.T.	Q lon	Area	ppbv	ppbv	Recove
1	Chlgrobenzene-d5 (IS)		16.09	117.00	1234782	50.0		100%
2	Dichlorodifluoromethane (12)	75-71-8	2.15	85.00	15232	ND	0.9	:
3	Chloromethane	74-87-3	0.00	52.00	O	ND	0.9	
4	1,2-,CF 1,1,2,2-F sthane (114)	76-14-2	0.00	85.00	ū	ND	0.9	
5	Viny) chloride	75-01-4	0.00	62.00	Ö	ND	0.9	
- 6	1.3-Butadiene	106-99-0	0.00	54.00	ō	ND	0.9	
7	Bromomethane	74-83-9	0.00	94.00	ū	ND	0.9	
8	Chloroethane	75-00-3	0.00	64.00	ō	ND	0.9	
9	Trichlorofluoromethane (11)	75-69-4	0.00	101.00	ō	ND	0.9	
10	1.1-Dichloroethene	75-35-4	0.00	61.00	Ď	ND	0.9	
11	1,1,2- Cl 1,2,2- F ethane (113)	76-13-1	0.00	151.00	ō	ND	0.9	
12	Methylene Chloride	75-0 <del>9</del> -2	0.00	84.00	ō	ND	0.9	
13	1.1-dichlorosthane	75-34-3	0.00	63.00	ō	ND	0.9	
14	Methyl t-butyl ether (MTSE)	1634-04-4	0.00	73.00	ō	ND	0.9	
15	cis-1,2-Dichloroethene	158-59-2	0.00	61.00	ă	ND	0.9	
16	Bromochloromethane (SS)	100 03-2	9.74	130.00	348359	54.2	<b>U</b> .5	108%
	Chloroform	67-66-3	0.00	83.00		ND	0.9	160.18
	1,1,1-Trichloroethane	71-55-6	0.00	97.GQ	0	ND	0.9	
19	1,2-Dichloroethane	107-06-2	0.00	62.00	0	סא סא	Q.9	
	Carbon tetrachloride		0.00		0			
		56-23-5	11.26	117.00	0	NO	0.9	
	Benzene	71-43-2		78.00	15461	ND	0.9	000/
	1,4-Difluorobenzene (SS)	20.04.0	11.81	114.00	1474904	48.9	^ ^	98%
	Trichloroethene	79-01-6	0.00	130.00	0	ND	0.9	
	1,2-dichloropropane	78-87-5	0.00	63.00	0	ND	0.9	
	cis-1,3-dichloropropene	542-75-6	0.00	75.00	0	ND	0.9	
	Toluene	108-88-3	14.24	91.00	43022	ND	0.9	
	rans-1,3-dichloropropene	10061-02-5	0.00	75.00	0	ND	0.9	
	1.1.2-Trichloroethane	79-00-5	0.00	97.00	0	ND	0.9	
	Tetrachioroethene	127-18-4	15.37	164.00	75994	2.4	0.9	
	1,2-Dibromoethane	106-93-4	0.00	107.00	0	ND	0.9	
	Chlorobenzene	108-90-7	0.00	112.00	0	ND	0.9	
	Ethyl benzene	100-41-4	16.70	91.00	12196	ND	0.9	
	n,p-Xylene	1330-20-7	16.93	91.00	37861	ND	0.9	
	-Xylene	95-47-6	17.44	91.00	13252	סא	0.9	**
	Styrene	100-42-5	0.00	104.00	0	QИ	0.9	
	.1,2,2-Tetrachloroethane	79-34-5	0.00	83.00	0	ND	0.9	
	Iromofluorobenzene (SS)	•	17.99	95.00	607431	45.5		91%
	.3.5-Trimethylbenzene	108-67-8	0.00	105.00	0	מא	0.9	
	.2.4-Trimethylbenzene	95-63-6	0.00	105.00	0	ND	0,9	
	3-Dichlarobenzene	541-73- <u>1</u>	0.00	146.00	0	מא	0.9	
	lenzyl chloride	100-44-7	0.00	91.00	0	ND	0.9	
	4-Dichlorobenzene	106-46-7	0.00	148.00	0	ND	0.9	•
	.2-Dichlorobenzene	95-50-1	0.00	146.00	0	ND	0.9	
	,2,4-Trichlorobenzene	120-82-1	0.00	180.00	0	ND	0.9	
***************************************	exachlorobutadiene	87-68-3	0.00	225.00	0	ND	0.9	
	•	aceable Standard	Cylinder:	Spectra G	ases L69236.	1ppmv		
93	50_\$B.D 920_10D.D	830_50C.D				_30C.D		
	: Date Printed: 10/6	00 9:26 AM	Report: To	2-15RPT3	XLS			

SS = Surrogate Standard, IS = Internal Standard 50 ng each

CorSPS-1 Fused Silica; 30m x 0 25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutsch: -BC Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_lci.

ND = Not Detected at the Reporting Limits.

<sup>&</sup>quot;Note that 1,3-bistadiane and MTBE are TO-15 compounds only and not TO-14 targets."

Sample:	Philip 197236 Sevenson/Olin	9/18/00		А	utosampier: '	Dil. Fact: 1.9		
Misc:	nation off; 500ml; North of Ar	ca B .			5970N4SC			
Method:	92000IS	File: C:\HP	CHEM1192	1000	1421099.D		Reporting	٠
	•				•		Limits	IS/Surr.
Cmpd #	Compound	CAS#	R.T.	Qion	SenA	ррьч	vđqq	Recover
1	Chiorobenzene-d5 (IS)		16.09	117.00	1265998	50.0		100%
2	Dichlorodifluoromethane (12)	75-71-8	2.15	85.00	14861	ND	1.0	•
3	Chidromethans	74-87-3	0 00	52.00	0	ND	1.0	
4	1.2- CF 1.1.2.2-F ethane (114)	76-14-2	0.00	85.00	O	ND	1.0	
5	Vinyl chloride	75-01-4	0.00	6Z.00	0	ND	1.0	
6	1,3-Butadiene	106-99-0	0.00	54.00	0	ND	1.0	
7	Bromomethane	74-83-9	0.00	94.00	. 0	ND	1.0	
8	Chloroethane	75 <b>-00-3</b>	0.00	64.00	٥	ND	1.0	•
g	- Trichlorofluoromethane (11)	75-69 <del>-4</del>	0.00	101.00	0	ND	1.0	
10	1,1-Dichloroethene	75-35-4	0.00	61.00	O	DИ	1.0	
11	1,1,2- CI 1,2,2- F ethane (113)	76-13-1	0.00	151.00	٥	ND	1.0	
12	Methylene Chloride	75-09-2	0.00	84.00	0	מא	1.0	
13	1,1-dichloroethane	<sup>4</sup> 75-34-3	0.00	63.00	0	ND	1.0	
14	Methyl I-bulyl ether (MTBE)	1634-04-4	0.00	73.00	0	ND	1.0	
15	cis-1,2-Dichloroethene	156-59-2	0.00	61.00	0	ND	1.0	
16	Bromochipromethane (SS)		9.7 <del>8</del>	130.00	363032	55.1		110%
17	Chloroform	<b>67-86-</b> 3	0.00	83.00	0	ND	1.0	
18	1,1,1-Trichloroethane	71-5 <del>5</del> -6	0.00	97.00	Ö	ND	1.0	
19	1.2-Dichloroethane	107-05-2	0.00	62.00	ō.	ND	1.0	
20	Carbon tetrachioride	56-23-5	0.00	117.00	o i	ND	1.0	
21	Benzene	71-43-2	11.26	78.00	16305	ND	1.0	
22	1,4-Diffuorobenzene (SS)		11.81	114.00	1562110	50.5		101%
23	Trichloroethene	79-01-6	0.00	130.00	0	ND	1.0	•
24	1,2-dichloropropane	78-87-5	0.00	63.00	o	ND	1.0	
25	cis-1,3-dichloropropene	542-75-6	0.00	75.00	Ď	ND	1.0	
26	Toluene	108-88-3	14.24	91.00	85162	1.0	1.0	
27	trans-1,3-dichloropropene	10061-02-6	0.00	75.00	0	ND	1.0	
28	1,1,2-Trichloroethane	79-00-5	13.61	97.00	79073	2.5	1.0	
29	Tetrachloroethene	127-18-4	15 39	164.00	47479	1.6	1.0	
30	1,2-Dibromoethane	106-93-4	0.00	107.00	0	ND	1.0	
31	Chlorobenzene	108-90-7	0.00	112.00	ä	ND	1.0	
32	Ethyl benzene	100-41-4	16.70	91.00	12793	ND	1.0	
33	m,p-Xylene	1330-20-7	16.93	91.00	35737	ND	1.0	
	o-Xylene	95-47-6	17.44	91.00	12258	ND	1.0	
	Styrene	100-42-5	0.00	104.00	0	מא	1.0	
36	1.1.2.2-Tetrachloroethane	79-34-5	0.00	83.00	0	ND	1.0	
	Bromofluoropenzene (SS)	· • • •	17.99	95.00	610486	44.5		89%
	1,3,5-Trimethylbenzene	108-67-8	0.00	105.00	010-00	QN QN	1.0	**************************************
	1.2.4-Trimethylbenzene	95-63-6	19.85	105.00	10618	ND	1.0	
	1,3-Dichlorobenzene	541-73-1	0.00	146.00	0	ND	1.0	
	Benzyl chloride	100-44-7	20.57	91.00	10975	1.1	1.0	
	1,4-Dichlorobenzene	106-46-7	0.00	146.00	0	ND	1.0	
	1,2-Dichlorobenzene	95-50-1	0.00	146.00	ő	ND	1.0	•
	1,2,4-Trichlorobenzene	120-82-1	0.00	180.00	Ö	םא סא	1.0	
	Hexachlorobutadiene	87-68-3	0.00	225.00	ŏ	ND	1.0	
		raceable Standan						
	920_5B.D 920_10D D	\$20_20C.D	y 1 w w 1 ·			30C.D		
•	<del>-</del>	6/00 9:28 AM	Report: T	<b>∩_1</b> ₹₽₽₹		~~.		
	- Date Finited. 10/	~~~ <b>4.40</b> ~\\	vehor i	<b>~</b> (₽RF),	ン・ヘルン			

ND = Not Detected at the Reporting Limits.

Col:SPB-1 Fused Silics; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C; TO14/15\_lci.

SS = Surrogate Standard, IS = Imemal Standard 50 ng each

<sup>&</sup>quot;Note that 1,3-butsdiene and MTBE are TO-15 compounds only and not TO-14 targets."

8100 Brownleigh Drive, Suite 120 Raleigh, NC 27617



919 510-0228 Telephone 919 510-0141 Fax

Web Site: www.rtp-labs.com

#### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin Pr

Project No. 197010

Sample Date: 9/18/2000 Analysis Date: 10/5/2000 Matrix: Air in Summa Canister
Date Received: 9/28/2000

Sample ID:

1421096 canister 93254 "SW of drum Area A"

Compound	Estimated ppbv*	
2,2,5-trimethyl hexanc	8	
bexanal	15	
Sample ID: 1421097 canis	ter 63120 "East of first gate to Biocell"	
Compound	Estimated ppbv*	
No TICs detected		
Sample ID: 1421098 canist	ter 12533 "North of Concrete Soil Pad"	
Compound	Estimated ppbv*	
Butanai	27	
ormic acid, butyl acid	29	
timethyl disulfide	5	
Sample ID: 1421099 canist	er 93047 "North of Area B"	
Compound	Estimated ppbv*	· · · · · · · · · · · · · · · · · · ·
4.4.4	30	•
. <del>4</del> .4-tribletityi-i-peniene	# <b>*</b>	
	7	
.4,4-trimethyl-1-pentene ,2,6,6-tetramethyl-4-beptane ,2,4,6,6-pentamethyl-3-heptene	7 8	

Estimated values were calculated against the  $d_r$ -Chlorobenzene internal standard assuming a 1:1 response ratio.

File: 197236.doc/als

#### Research Triangle Park Laboratories, Inc. 8100 Brownieigh Drive, Suite 120 Raieigh, North Carolina 27617 (new zipcode) Phone: 919-510-0228 Fax: 919-510-0141 Wab Site: www.rtp-labs.com

# Chain of Custody Record

ISO 17025 Compliant for Testing Labs



Client Seven son Enveronment Address % Olin Corp @ City Wilmington	<b>L.</b>	Project Manager  B. 11 M.	Phop 47	Num	ber 657	- 45	46/	Fax	Sum 657	40	Date: 9/26/00	., .,
Address % Ofin Core @	51 Eames	St.			R	eque	steti	Anei	yses		Page 1 of 1	· Hamsoniki inskrasj
Chy Wilmington	Bide MA	ZIp Code									RTP Labs Proj. Trackir	ıg No.:
Contractive cases of the Mo.: Piopes	t riemei		#tj.	rtainer	5	1000 A		***************************************		1	#19723	6
Sample ID No. and Description	n Remedia	Matrix	Preservative	of Containers	F	20°5			-		O manus and a	Franciscom B
	1-18-00 17:	Air, Lig, Saild			(	3					Comments	
93120 East of frest estate back	<del> </del>	7 /41/			1						1421096 1097	
93120 East of first gale to bioco	Jek V	<u> </u>									1098	
93047 North of Aven B	7-18-00 171	5 Av	-		/_					· · · · ·	1099	
			-						<del>-</del>			
			<del> </del>				<u></u>					
·			<u> </u>			<u> </u>	<u>L_</u>	<u></u>	<u> </u>			
Turn Around Time Requested for Reports Busine	sex Days; "Rush Mu 5 days (1,5%) []10	ltgellere (X.e.) dever*(1.1x) ☐ 15 de	iye	Carl Sie	a Pack ctronic	: Std [ Delive	Full Habia		is autre la surr	ther)	Possible Hazardal Known Conc	unitaliona:
Relinquished By: fel JULL	- h	rie: Time Liefen 173	1	Re	celved	By:	^				Date:	Time:
Fig. chain RTF docisis revision 6/1/2000	hull # 82	2.5206741		Re	calved	ВУ	el	ra.	En	lal	Data: 9-28-00 /0	Time:



#### INDUSTRIAL HYGIENE

#### ENVIRONMENTAL TESTING

• EPA/NVLAP 101262-0

• AIHA ACCREDITATION NO. 100439

• NY DOH 10903 • PA DER 06-353

• NJ DEP 77678

## **ANALYTICAL REPORT**

Client:

Sevenson Environmental Services, Inc.

Project:

197504

Report to:

Adam Hibbard

Sevenson Environmental Services, Inc.

51 Eames Street

Willimington MA 01887

Received:

09-OCT-00

Reported:

31-OCT-00

Project Description:

Olin Remediation Summas

TO-15 & Lib. Search

RESULT

UNITS

METHOD

DATE

**ANALYST** 

11344 N. Side Bio Cell

Lab Sample: 1422250 sampled: 28-SEP-00 17:30

See Attached Report

93242 S. Side Bio Cell

Lab Sample: 1422251 sampled: 28-SEP-00 17:30

See Attached Report

11412 N. Side Debris Area

Lab Sample: 1422252 sampled: 28-SEP-00 17:30

See Attached Report

00183 S. Side Debris Area

Lab Sample: 1422253 sampled: 28-SEP-00 17:30

See Attached Report

92044 N. Side Bio Celi

Lab Sample: 1422254 sampled: 29-SEP-00 17:30

See Attached Report



#### INDUSTRIAL HYGIENE

#### ENVIRONMENTAL TESTING

\* EPA/NVLAP 101262-0

• AIHA ACCREDITATION NO. 100439 • P.

• NY DOH 10903 • PA DER 06-353 • NJ DEP 77673

Client:

Sevenson Environmental Services, Inc.

Project:

197504

RESULT

UNITS

METHOD

DATE

ANALYS"

92025 S. Side Bio Cell

Lab Sample: 1422255

sampled: 29-SEP-00 17:30

See Attached Report

93178 N. Side Debris Area

Lab Sample: 1422256

sampled: 29-SEP-00 17:30

See Attached Report

02488 S. Side Debris Area

Lab Sample: 1422257

sampled: 29-SEP-00 17:30

See Attached Report

<sup>&</sup>lt; Indicates less than the limit of quantitation.

Sample:	Philip 197504 Sevenson	Olin 9/28/00		A	rtosampler: (		Dil. Fact	1.7
Misc:	500mL; can 11344; N Si		•					5970MSD1
Method:	92000IS	File: C.\HP	CHEM\1\92	10001	1422250.D		Reporting	
							Limits	IS/Surr.
Cmpd #	Compound	CAS#	R.T.	Q ion	eera.	vdqq	bb pa	Recovery
4	Chlorobenzene-d5 (IS)		16.07	117.00	709485	50.0	Control of the Contro	100%
2	Dichlorodifluoromethane	(12) 75-71-8	2 <i>.</i> 20	85.00	17987	ND	0.8	•
3	Chloromethane	74-87-3	0.00	52.00	0	ND	0.8	
4	1,2- CI- 1,1,2.2-F ethane	•	0:00	85.00	Ō	ND	0.8	
. 5	Vinyl chloride	75-01-4	0.00	62.00	ō	ND	0.8	
8	1,3-Butadiene	106-99-0	0.00	54.00	. 0	ND	0.8	
7	Bromomethane	74-83-9	0.00	94,00	Ō	ND	0.8	
8	Chlorosthane	75-00-3	0.00	64.00	o	ND	0.8	
8	Trichlorofluoromethane (1		0.00	101.00	O	ND	0.8	
10	1,1-Dichloroethene	75-35-4	0.00	61.00	0	NO	0.8	
11	1,1,2- Cl 1,2,2- F ethane (		0.00	151.00	0	ND	0.8	
12	Methylene Chloride	75-09-2	7.48	84.00	19065	1.3	0.8	
13	1,1-dichtoroethane	, 75-34-3	0.00		O	ND	0.8	
14	Methyl t-butyl ether (MTB)	•	0,00	73.00	٥	סא	0.8	
15	cis-1,2-Dichloroethene	156-59-2	0.00	81.00	Ď	ND	0.8	
16	Bromochloromethane (SS		9.76	130.00	233355	63.2	<b>.</b> -	126%
17	Chloroform	67-66-3	0.00	83.00	255555	ND	0.8	14.070
18	1,1,1-Trichloroethane	71-55-6	0.00	97.00	ő	סא	0.8	
19	1,2-Dichloroethane	107-06-2	0.00	6Z.00	Ö	ND	0.8	
20	Carpon tetrachionde	56-23-5	0.00	117.00	o	ND	0.8	
21	Benzene	71-43-2	11.18	78.00	339837	7.8	0.8	
		/ 1-40-2	11.79	114.00	1144301	66.1	<b>U. U</b>	132%
22	1,4-Diffuorobenzene (SS)	79-01-8	0.00	130.00	1 1443U 1 0	ND	0.8	13278
23	Trichloroethene i 1,2-dichloropropane	78-87-5	0.00	63.00	0	ND	0.8 0.8	
24 25	cis-1,3-dichloropropane	542-75-6	0.00	75.00	0	ND	0.8	
2 <del>3</del> 26	Toluene	108-88-3	14.19	91.00	227703	4.3	0.8	
20 27	trans-1,3-dichloropropene	10061-02-8	0.00	75.00	227703	ND	0.8	
28	1,1,2-Trichloroethane	79-00-5	0.00	97.00	0	ND	0.8	
29	Tetrachloroethene	127-18-4	0.00	164.00	0	DN	0.8	
30	1,2-Dibromoethane	106-93-4	0.00	107.00	ő	ND	0.8	
31	Chlorobenzene	108-90-7	0.00	112.00	Ö	DN	0.8	
32	Ethyl benzene	100-41-4	16.68	91.00	19991	סא	0.8	
33	m,p-Xylene	1330-20-7	16.89	91.00	46780	סא	0.8	
34	o-Xylene	95-47-6	17.42	91.00	18144	ND	0.8	
35	Styrene	100-42-5	0.00	104.00	0	ND	0.8	
36	1,1,2.2-Tetrachio cethane	79-34-5	0.00	83.00	Ö	ND	0.8	
37	Bromofluorobenzene (SS)	13"07"0	17.95	95.00	325411	42.4	0.0	85%
3 <i>1</i> 38	1,3,5-Trimethylbeinzene	108-67-8	19.10	105.00	20359	ND	0.8	D.J. 70
3 <del>8</del>	1,2,4-Trimethylbenzene	95-63-6	19.81	105.00	20095	ND	0.8	
40	1,3-Dichiorobenzane	541-73-1	0.00	146.00	20030	מא	0.8	
	Benzyl chloride	100-44-7	0.00	91.00	0	ND	0.8	
	1.4-Dichlorobenziene	106-48-7	0.00	146,00	0	ND ND	0.8	
	1,2-Dichlorobenziene	95-50-1	0.00	146.00	0	ND	0.8	
	1,2,4-Trichlorobenzene	120-82-1	0.00	180.00	0	ND	0.8 0.8	
	Hexachiorobutaciene	87-68-3	0.00	225.00	0	ND	0.8	
		IST Traceable Standar	The second state of the se					
	920_5B.D \$20_10D D	920_200.0		~~~~~~		0_30C.D		•
	Date Printed:	10/17/00 10:16 AM	Ronner 7	'0-15RPT				
A-+1370/701	ware i iiil@J.	TOTALIOUS IN TO PART	· VORVII.	~- (~!\T" {	~~\ <b>~</b>			

ND = Not Detected at the Reporting Limits. SS = Surrogate Standard; IS = Internal Standard 50 ng each Cot:SP8-1 Fused SMca; 30m x 0.25mm, 0.25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutech: -5C Tenax/Anasorb 747 Trac; describ @ 180C; TO14/15\_lci.

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Sample:	Philip 197504 Sevenson/Olin 9/2			A.	0	Dil. Fact 1.7		
Alac:	500mL; can 93242, S. Side of Bi							5970MSC
Hethod:	92000(S F	ile: C:WPC	HEM\1\92	000/	1422251.D	•	Reporting	
•							Limits	IS/Sur
Cmpd #	Compound	CAS#	R.T.	noi D	Area	oppv	bopa	Recove
1	Chlorobenzene-d5 (IS)		18.07	117.00	887130	50.0		100%
2	Dichlorodifluoromethane (12)	75-71-8	2.18	85.00	18763	ND	0.8	
3	Chloromethane	74-87-3	0.00	52.00	0	ND	8.0	
4	1.2- CL 1.1.2.2-F ethane (114)	76-14-2	0.00	85.00	0	ND	8.0	
5	Vinyi chloride	75-01-4	0.00	62.00	0	DA	0.8	
6	1,3-Butadiene	106-99-0	0.00	54.00	٥	ND	0.8	
7	Bromomethane	74-83-9	0.00	94.00	0	ND	0.8	
8	Chloroethane	75-00-3	0.00	64.00	0	ND	8.0	
8	Trichlorofluoromethane (11)	75- <i>6</i> 9-4	0.00	101.00	0	ND	0.8	
10	1,1-Dichloroethene	75-35-4	0.00	61.00	0	ND NO	8.0	
11	1,1,2- Cl 1,2,2- Flethane (113)	78-13-1	0.00	151.00	0	ON	8.0	
12	Methylene Chloride	75-09-2	0.00	84.00	0	ND ND	8.0	
13	1,1-dichloroethage	75-34-3	0.00	63.00	0		0.8	
14	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00	0	ND	8.0	
15	cis-1,2-Dichloroethene	156-59-2	0.00	61.00	0	ND	0.8	
16	Bromochloromethane (SS)		9.74	130.00	287707	62.3		125%
17	Chloroform	67-66-3	0.00	83.00	0	ND	0.8	
18	1.1.1-Trichloroethane	71-55-6	0.00	97.00	0	ND	0.8	
19	1,2-Dichloroethane	107-06-2	0.00	62.00	0	ND	0.8	
20	Carbon tetrachloride	56-23-5	0.00	117.00	0	ND	8.0	
	Benzene	71-43-2	11,21	78.00	188803	3.5	0.8	* 0 / 5/
22	1,4-Diffuorobenzene (SS)		11.79	114.00	1451327	67.0	<b>A</b> 5	134%
	Trichloroethene	79-01-6	0.00	130.00	0	ND	8.0	
24	1.2-dichloropropane	78-87-5	0.00	63.00	0	ND	0.8	
	cis-1,3-dichloropropene	542-75-6	0.00	75.00	0	ND	8.0	
	Toluene	108-88-3	14.22	91.00	84883	1.3		
	trans-1,3-dichloropropene	10061-02-6	00.00	75.00	0	ND	0.8	
	1,1,2-Trichloroethane	79-00-5	0.00	97.00	0	ND ND	0.8 0.8	
	Tetrachloroetherie	127-18-4	0.00 0.00	164,00 107,00	0	ND ND	0.8 0.8	
	1,2-Dibromoethane Chlorobenzene	106-93-4 108-90-7	0.00	112,00	٥	ND ND	0.8	
	Ethyl benzene	100-41-4	16.58	91.00	12245	ND	0.8	
	m.p-Xylene	1330-20-7	16.89	91.00 91.00	31780	DN DN	0.8	
	o-Xylene	95-47-6	17.42	91.00	13192	ND	8.0	
	Styrene	100-42-5	0.00	104.00	0	ם. סא	0.8	
	1,1,2.2-Tetrachioroethane	79-34-5	0.00	83.00	0	ND	0.8	
	Bromofiuorobenzene (SS)	1 OTHER	17.95	95.00	395748	41.2	<b>J.</b> U	82%
	1.3.5-Trimethylbenzene	108-87-8	17.95	105.00	14617	ND	0.8	U45 / U
	1,2,4-Trimethylbenzene	95-63-6	19.10	105.00	16927	מא סא	0.8	
	1,3-Dichlorobenzene	541-73-1	0.00	145.00	10371	ND	0.8	
	Berzyl chloride	100-44-7	20.53	91.00	13529	1.6	0.8	
	1.4-Dichlorobenzene	108-46-7	0.00	146.00	وعدد،	ND	0.8	
	1,2-Dichlorobenzene	95-50-1	0.00	145.00	. 0	ND	0.8	
	1,2,4 Trichlorobenzene	120-82-1	0.00	180.00	0	ND	0.8	
	Hexachlorobutadiene	87-68-3	0.00	225.00	0	ND	0.8	
		iceable Standard						
			, y 100 (100 t) .	-p				
•	920_58.D 920_100 D Date Printed: 10/17/	920_20C.D 00 10:17 AM	Report: 1	O-15RPT		0_30C.D		

ND = Not Detected at the Reporting Limits. SS = Surrogate Standard; 13 = Internal Standard 50 ng each
Cot:SPB-1 Fused Silica; 30m = 0.25mm, 0.25u film, direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutzch: -5C Tenax/Anasoro 747 Trap; desoro @ 180C; TO14/15\_lci.

<sup>&</sup>quot;Note that 1.3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Autosampler: 11 Dil. Fact: 3.1 Sample: Philip 197504 Sevenson/Olin 9/28/00 500mL; can 11412; N. Side of Debris Area 5970MSD1 Misc: C:\HPCHEM\1\92000\ 1422252.D Reporting Method: 92000IS File: Limits IS/Surr. ppbv Recovery CAS# ppby R.T. Q ion Area Compound Cmpd # 100% 16.07 117.00 897403 50.0 Chlorobenzene-d5 (IS) 1 0.00 85.00 0 ND 1.6 75-71-8 2 Dichlorodifluoromethane (12) Ö ND 1.6 0.00 52.00 3 Chloromethane 74-87-3 ND 16 0.00 85.00 0 1,2- Cl- 1,1,2,2-F, ethane (114) 76-14-2 4 0 ND 1.6 75-01-4 0.00 62.00 5 Vinyl chloride ND 0 1.6 6 1.3-Butadiene 106-99-0 0.00 54.00 74-83-9 0.00 94.00 0 ND 1.6 7 Bromomethane 75-00-3 0.00 64.00 0 ND 1.6 Chloroethane 8 0 ND 75-69-4 0.00 101.00 1.6 Trichloroffuorométhane (11) 9 ND 0 1.1-Dichloroethehe 75-35-4 0.00 61.00 1.6 10 0.00 0 ND 1.6 1,1,2- Cl 1,2,2- Flethane (113) 76-13-1 151.00 11 0.00 84.00 0 NO 1.6 75-09-2 12 Methylene Chloride ND 1.6 63.00 0 13 1,1-dichlomethane 75-34-3 0.00 Methyl I-butyl ether (MTBE) 1634-04-4 0.00 73.00 0 ND 1.6 14 15 cis-1.2-Dichloroetnene 156-59-2 0.00 61.00 0 ND 1.5 Bromochloromethane (SS) 9.76 130.00 266674 57.1 114% 16 ND 1.6 17 Chloroform 67-68-3 0.00 83.00 0 0.00 97.00 ND 1.6 18 1.1.1-Trichloroethane 71-55-5 0 107-06-2 0.00 62.00 0 ND 1.8 19 1,2-Dichloroethahe ND 1.6 20 Carbon tetrachloride 56-23-5 0.00 117.00 0 124989 4.2 1.6 21 Benzene 71-43-2 11.23 78.00 1322934 121% 22 1.4-Diffuorobenzene (SS) 80.4 11.81 114.00 Trichloroethene: 79-01-5 130.00 ND 1.6 23 0.00 0 0.00 63.00 0 ND 1.5 24 1,2-dichloropropane 78-87-5 ND 1,6 25 cis-1,3-dichloropropene 542-75-6 00.0 75.00 0 ND 26 Toluene 108-88-3 14.24 91.00 49538 1.8 trans-1,3-dichloropropene 10061-02-6 ND 27 0.00 75.00 0 1.6 ND 1.6 28 1.1.2-Trichloroethane 79-00-5 0.00 97.00 0 ND 29 Tetrachloroethene 127-18-4 0.00 164.00 0 1.6 30 1.2-Dibromoethane 106-93-4 0.00 107.00 0 ND 1.6 31 Chlorobenzene 108-90-7 0.00 112.00 0 ND 1.6 27080 ND 1.6 32 16.91 91.00 Ethyl benzene 100-41-4 33 m.p-Xylane 1330-20-7 16.91 91.00 27060 ND 1.6 34 o-Xylene 95-47-6 17.42 91.00 11898 ND 1.6 ND 1.6 35 100-42-5 0.00 104.00 0 Styrene 0.00 83.00 0 ND 1.6 36 1.1.2.2-Tetrachioroethane 79-34-5 62% 17.97 95.00 40.9 37 Bromofluorobenzene (SS) 397521 1.6 1,3,5-Trimethylbenzene 108-67-8 0.00 105.00 ND 38 10894 ND 1.6 19.83 105.00 39 1,2,4-Trimethylbenzene 95-63-6 ND 1.8 0.00 148.00 0 40 1.3-Dichlorobenzene 541-73-1 1.8 41 Senzyl chloride 100-44-7 0.00 91.00 0 ND 42 1.4-Dichlorobenzene 106-46-7 0.00 146.00 0 ND 1.5 43 1.2-Dichlorobenzene 95-50-1 0.00 148.00 0 ND 1.6 44 1.2.4-Trichlorobenzene 120-82-1 0.00 180.00 0 ND 1.6 Haxachlorobutadiene 0.00 225.00 0 ND 1.6 45 87-68-3 Calibration Data: NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv 920 58.0 920 10D D 920\_20C.D 920\_30C D Date Printed: Report: TO-15RPT3.XLS 10/17/00:10:17 AM

ND = Not Detected at the Reporting Limits. SS = Surrogate Standard; IS = Internal Standard 50 ng each Col:SPB-1 Fused Silics; 30m x 0.25mm, 0.25m film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan Nutech: -5C Tenax/Anasorb 747 Trap; desorb @ 180C, TO14/15\_lcs

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Sample: Misc:								
	500mL; can 0183; S Side o	! Debns Area					5970MSD	
Method:			CHEM\1\92	1000!	1422253.D		Reporting	
	***************************************						Limits	IS/Sun
Cmpd #	Compound	CAS #	R.T.	Q ion	Area	ppbv	bbpA	Recove
1	Chlorobenzene-d5 (IS)		16.09	117.00	888881	50.0		100%
2	Dichlorodiffuoronethane (12	75-71-8	2.18	85.00	17608	סא	0.8	*
3	Chioromethane	74-87-3	0.00			ND	0.8	
4	1,2- CI- 1,1,2,2-Fi ethane (11	7	0,00			ND	0.8	
5	Vinyl chloride	75-01-4	0.00	62.00		ND	0.8	
6	1,3-Butadlene	106-99-0	0.00	54.00	O	DN	0.8	
7	Bromomethane	74-83-9	0.00	94.00	0	ND	8.0	
8	Chloroethane	75-00-3	0.00	64.00	0	ND	0.8	
9	Trichlorofluoromethane (11)	75-69-4	0.00	101.00		ND	0.8	
10	1,1-Dichloroethene	75-35-4	0.00	61.00		ND	8.0	
11	1,1,2- Cl 1,2,2- Flethane (11		0.00	151.00		ND	0.8	
12	Methylene Chloride	75-09-2	7.50	84.00		1.2	0.8	
13	1,1-dichloroethane	75-34-3	0.00	63.00	0	ND	0.8	
	Methyl t-butyl ether (MTBE)	1634-04-4	0.00	73.00		NO	0.8	
14		156-59-2	0.00	61.00	ō	NO	0.8	
15	cis-1,2-Dichloroethene	130-39-2		130.00		56.2	5.5	112%
16	Bromochloromethane (SS)	#T 66 6	9.77	=	260359		0.8	1 14,70
17	Chloroform	67-66-3	0.00	83.00	0	ND		
18	1,1.1-Trichloroethane	71-55-6	0.00	97.00	0	ND	0.8	
19	1,2-Dichloroethane	107-06-2	0.00	62.00	0	ND	0.8	
	Carbon tetrachloride	56-23-5	0.00	117.00	0	ND	0.8	
21	Benzene	71-43-2	11.25	78.00	127049	2.3	0.8	
22	1,4-Diffuorabenzene (SS)		11 83	114.00	1189518	54.8		110%
23	Trichloroethene	79-01-5	0.00	130.00	0	ND.		
24	1,2-dichloropropane	78-87-5	0.00	63.00	٥	סא	Q.8	
25	cis-1,3-dichloropropene	542-75-8	0.00	75.00	0	ND	0.8	
26	Toluene	108-88-3	14.24	91.00	93906	1.4	0.8	
27	trans-1,3-dichloropropene	10051-02-6	0.00	75.00	. 0	ND	8.0	
28	1,1,2-Trichloroethane	79-00-5	0,00	97.00	O	ND	0.8	
	Tetrachioroethere	127-18-4	0.00	164.00	O	ND	0.8	
	1,2-Dibromoethane	106-93-4	0.00	107.00	0	ND	0.8	
	Chlorobenzene	108-90-7	0.00	112.00	0	ND	0.8	
	Ethyl benzene	100-41-4	16.70	91.00	15418	ND	0.8	
	m.p-Xylane	1330-20-7	16.91	91.00	38884	ND	0.8	
	o-Xylene	95-47-6	17,44	91.00	14835	NO	0.8	
	Styrene	100-42-5	0.00	104.00	0	ND	8.0	
	1,1,2,2-Tetrachloroethane	79-34-5	0.00	83.00	. 0	ND	0.8	,
	Bromofluorobenzene (SS)	10.040	17.98	95.00	399281	41.5	•	83%
	1,3,5-Trimethylbenzene	108-67-8	19.13	105.00	16423	ND	0.8	
	1,2,4-Trimethylbenzene	85-83-6	19.83	105.00	16710	סא	0.8	
	1,3-Dichlorobenzene	541-73-1	0.00	146.00	0	סא	0.8	
	Benzyl chloride	100-44-7	20 55	91.00	19354	2.3	0.8	
	1	106-46-7	0.00	148.00	0	ND	0.8 0.8	
	1,4-Dichlorobenzene		0.00	146.00	0	סא סא	0.8	
	1,2-Dichlorobenzene	95-50-1	0.00	180.00	0	ON ON	0.8 0.8	
	1,2.4-Trichlorobenzene	120-82-1			0	ND ND	0.8	
	Hexachlorobutadiene	87-68-3	0.00	225.00			U.U	
		Traceable Standar	u Cymraer	opecua '				
5	920_5B.D 920_10D D	920_20C.D		TO-15RP1		20_30C.D		

ND = Not Detected at the Reporting Limits. SS = Surrogate Standard; IS = Internal Standard 50 ng each
Col:SPB-1 Fused Silica, 30m x 0 25mm, 0 25u film, direct interface, -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutech: -5C Tensa/Anssorb 747 Trap, desorb @ 180C; TO14/15\_kt.

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Sample:	Philip 197504 Sevenson/Otin 9	/29/00		A	utosampler: 1	3	Dil. Fact:	1.7
Misc:	500mL; can 92044; N Side of	Bio Cell		-			5970MSD1	
	92000IS		CHEM\1\82	2000\	1422254.D	*	Reporting	
							Limite	IS/Surr
Cmpd #	Compound	CAS #	R.T.	Q ion	Area	ppbv	bbpa	Recover
1	Chlorobenzene-d5 (IS)		16.07	117.00	894101	50.0		100%
2	Dichlorodifluoromethane (12)	75-71-8	2.22	85.00	16901	ND	0.8	
3	Chloromethane	74-87-3	0.00	52.00	0	DN	8.0	
4	1,2- Cl- 1.1.2.2-F ethane (114)	75-14-2	0.00	85.00	0	DN	8.0	
5	Vinyl chloride	75-01-4	0.00	62.00	0	ND	0.8	
6	1,3-Butadiene	106-99-0	0.00	54.00	O	ND	8.0	
7	Bromomethane	74-83-9	0.00	94.00	0	ND	0.8	
8	Chloroethane i	<b>75-00-</b> 3	0.00	64.00	. 0	DN	0.8	
9	Trichiorofluorométhana (11)	75-59-4	0.00	101.00	0	ND	0.8	
10	1, 1-Dichloroethene	75-35-4	0.00	61.00	. 0	ND	0.8	
11	1,1,2- Cl 1,2,2- F ethane (113)	76-13-1	0.00	151.00	0	ND	0.8	
12	Methylene Chloride	75-09-2	0.00	84.00	٥	ND	0.8	
13	1,1-dichloroethake /	75-34-3	0.00	63.00	0	ПN	0.8	
14	Methyl t-butyl ether (MTBE)	1834-04-4	0.00	73.00	0	ND	8.0	
15	cis-1_2-Dichloroethene	156-59-2	0.00	81.00	٥	ND	0.8	
18	Bromochloromethane (SS)		9.76	130.00	261674	56.2		112%
17	Chleroform	67-66-3	10.07	83.00	36990	ND	0.8	
18	1.1,1-Trichloroethane	71-55-5	0.00	87.00	G	ND	0.8	
19	1,2-Dichloroethane	107-06-2	0.00	6Z.00	0	ND	0.8	
20	Carpon tetrachloride	58-23-5	0.00	117.00	Ö	ND	0.8	
21	Benzene	71-43-2	11.23	78.00	103779	1.9	0.8	
22	1.4-Difluorobenzene (SS)		11.81	114.00	1097777	50.3		101%
23	Trichloroethene	79-01-8	0.00	130.00	0	ND	0.8	
	1,2-dichloropropane	78-87-5	0.00	63.00	Ö	ND	0.8	
	cis-1,3-dichloropropene	542-75-8	0.00	75.00	Ö	ND	0.8	
	Toluene	108-88-3	14.22	91.00	88114	1.3	0.8	
	trans-1,3-dichlorepropene	10061-02-8	0.00	75.00	0	ND	0.8	
	1,1,2-Trichloroethane	79-00-5	0.00	97.00	Ō	ND	0.8	
	Tetrachloroethene	127-18-4	0.00	164,00	٥	ND	0.8	
	1,2-Dibromoethane	106-93-4	0.00	107.00	0	NO	8.0	
	Chlorobenzene	108-90-7	0.00	112.00	- 0	ND	0.8	
	Ethyl benzene	100-41-4	16.68	91.00	14734	ND	0.8	
	m.p-Xylene	1330-20-7	16.89	91.00	39350	ND	0.8	
	o-Xylene	95-47-6	17.42	91.00	15354	ND	8.0	
	Styrene	100-42-5	0.00	104.00	0	ND	0.8	
	1,1,2,2-Tetrachidroethane	79-34-5	0.00	83.00	0	ND	0.8	
	Bromafluorobenzene (SS)	· + - · +	17.97	95.00	399589	41.3	. <del>.</del>	83%
	1,3,5-Trimethylbenzene	108-67-8	19.11	105.00	15865	ND	0.8	
	1,2.4-Trimethylbenzene	95-83-8	19.83	105.00	16380	ND	0.8	
	i.3-Dichlorobenzene	541-73-1	0.00	145.00	0	ND	0.8	
	Benzyl chloride	100-44-7	0.00	91.00	ŏ	ND	0.8	
	1.4-Dichlorobenzene	108-46-7	0.00	146.00	0	ND	0.8	
	, 2-Dichlorobenzene	95-50-1	0.00	146.00	ő	ND	8.0	
	I.2.4-Trichlorobenzene	120-82-1	0.00	180,00	ŏ	ND	0.8	
	Hexachknobutadiene	87-68-3	0.00	225.00	ō	ND	0.8	
		aceable Standard						
	20_58.D 920_100.D	920_20C.D	•	*		)_30C D		
_	<del></del>	7/00 10:18 AM		O-15RPT				

ND = Not Detected at the Reporting Limits SS = Surrogate Standard; IS = Internal Standard 50 ng each Col:SPB-1 Fused Silica; 30m ± 0.25mm, 0.25u film, direct interface, -50C for 2 min to 150 @ 6/m; 35-300 amu full scan Nutech; -5C Tenax/Anasorb 747 Trap, desorb @ 180C; TO14/15\_tc.

""Note that 1.3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

ALERCATION & DAMBLE & SEE FORM 11111

TO-14A/TO15 GC/MS Volatiles Report

Sample:	Philip 197504 Sevensor	1/Olin 9/29/00		AI	ntosampler: '	4	Dil. Fact	: 1,7
Misc:	500mL; can 92025; S. S.				•			5970MSD1
Method:			CHEM1192	000/	1422255.D	•	Reporting	
took man.							Limits	IS/Surr.
Cmpd #	Compound	CAS#	R.T.	Q ion	Area	vợqq	ppby	Recovery
1	Chlorobenzene-d5 (IS)		16.06	117.00	866272	50.0		100%
2	Dichlorodifluoromethane	(12) 75-71-8	2.20	85.00	16901	ND	0.8	٠
3	Chloromethane	74-87-3	2.01	52.00	45569	10,1	8.0	
4	1,2- Cl- 1,1,2,2-F ethane		0.00	85.00	0	ND	0.8	
5	Vinyl chloride	75-01-4	0.00	62.00	0	ПN	8.0	
8	1,3-Butadiene	108-99-0	0.00	54.00	0	ND	0.8	
7	Bromomethane	74-83-9	0.00	94.00	0	ND	0.8	
8	Chloroethane	75-00-3	0.00	64.00	0	ND	0.8	
9	Trichlorofluoromethane		0.00	101.00	0	ND	0.8	
10	1,1-Dichloroethene	75-35-4	0.00	61.00	0	מא	0.8	
11	1,1,2- Cl 1,2,2- Flethane		0.00	151.00	0	ND	0,8	
12	Methylene Chloride	75-09-2	0.00	84.00	0	ND	0.8	
13	1,1-dichiomethane	75-34-3	0.00	63.00	0	DN	0.8	•
14	Methyl t-butyl ether (MTE		0.00	73.00	0	ND	0.8	
15	cis-1,2-Dichloroethene	156-59-2	0.00	81:00	ō	ND	0,8	
16	Bromochloromethane (S		9.73	130.00	2 <b>7</b> 53 <b>22</b>	61.0		122%
17	Chlorotorm	67-66-3	10.00	83.00	84332	2.0	0.8	3 Mp. du 7 V
	1,1,1-Trichloroethane	71-55-6	0.00	97.00	04332	ND	0.8 0.8	
18	1,2-Dichloroethane	107-06-2	0.00	62.00	0	ND	0.8	
19	Carbon tetrachloride	· ·	0.00		0	ND	0.8	
20	· · · · · · · · · · · · · · · · · · ·	56-23-5	11.20	117.00 78.00	88508	1.7	0.8	
21	Benzene	71-43-2				55.9	0.0	112%
22	1.4-Diffuorobenzene (SS	•	11.80	114.00	1182410	ND	0.8	1 14,70
23	Trichloroethene	79-01-6	0.00	130.00	0		0.8	
24	1,2-dichloropropane	78-87-5	0.00	63.00	0	ND		
25	cis-1,3-dichloropropene	542-75-6	0.00	75.00	0	ND	0.8 0.8	
26	Toluene	108-88-3	14.19 13.85	91.00 75.00	112406 66537	1.8 3.0	0.8	
27	trans-1,3-dichloropropen- 1,1,2-Trichloroethane		0.00		0	3.0 DN	0.8	
28	Tetrachloroetherie	79-00-5	15.34	97.00 154.00	49888	2.2	0.8	
29	t	127-18-4	0.00		0	Z.Z DN	0.8	
30	1,2-Dibromoethene Chlorobenzene	106-93-4	0.00	107.00	0	ND	0.8	
31	•	108-90-7 100-41-4	16.66	112.00 91.00	16800	ND	0.8	
32 33	Ethyl benzene   m.p-Xylene	1330-20-7	16.86		58041	ND OM	0.8	
			17.41	91.00	19504		0.8	
34	o-Xylene	95-47-6 100-43-5		91.00		ND	0.8	
	Styreno	100-42-5	0.00	104.00	0	DN		
3 <del>6</del>	1,1,2,2-Tetrachioroethani		0.00	00.68	0	ND	0.8	
	Bromofluorobenzene (SS		17.98	95.00	391904	41.8		84%
	1.3.5-Trimethylbenzene	108-67-8	19 09	105.00	19022	ND	8,0	
	1,2,4-Trimethylbenzene	<b>95-63-6</b>	19.81	105.00	20294	ND	0.8	
	1.3-Dichlorobenzene	541-73-1	0.00	148.00	Ö	ND	0.8	
	Benzyl chloride	100-44-7	0.00	91.00	0	ND	0.8	
	1.4-Dichlorobenzene	106-46-7	0.00	146.00	0	ND	8.0	
	1.2-Dichlorobenzene	95-50-1	0.00	146.00	0	ND	0.8	
	1,2,4-Trichlorobenzene	120-82-1	0.00	180.00	0	ND	8.0	
	Hexachtorobutadione	87-68-3	0.00	225.00	0	ND	0.8	***************************************
		NIST Traceable Standa	ra Cylinder.	opectra (				
!	920_5B.D 920_100.D	920_20C.D				0_30C.D		
	Date Printed:	10/17/00 10:18 AM	Report: T	'O-15RPT	3.XLS			

ND . Not Detected at the Reporting Limits.

SS = Surrogate Standard: IS = Internal Standard 50 ng each

Col;SPB-1 Fused Sflica; 30m x 0 25mm, 0 25u film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan

Nutech. -SC Tenax/Anasoro 747 Trap. desoro @ 180C; TO14/15\_lci

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

Sample:	Philip 197504 Sevenson/Olin	8/29/00		A	utosampler: 1	Dil. Fact: 3.3			
Miso:	500mL; can 93178; N. Side o						5970MS		
Hethod:	92000IS	File; C:WPC	HEM1192	000/	1422256.D	1	Reporting		
							Limits	IS/Surr.	
Cmpd #	Compound	CAS #	R.T.	Q ion	<b>K97A</b>	ppbv	ppbv	Recover	
1	Chiorobenzene-d5 (IS)		18.07	117.00	744849	50.0		100%	
2	Dichlorodifluoromethane (12)	75-71-8	0.00	85.00	0	ND	1.7	•	
3	Chloromethane	74-87-3	0.00	52.00	0	ND	1.7		
4	1,2-Cl- 1,1,2,2-F ethane (114	s) 76-14-2	0.00	85.00	0	סא	1.7		
5	Vinyl chloride	75-01-4	0.00	62.00	0	ND	1.7		
6	1,3-Butadiene	106-99-0	0.00	54.00	0	ND	1.7		
7	Bromomethane	74-83-9	0.00	94.00	0	ND	1.7		
8	Chloroethane	75-00-3	0.00	64.00	0	ND	1.7		
9	Trichlorofluoromethane (11)	75-69 <del>-4</del>	0.00	101.00	0	ND	1.7		
10	1,1-Dichloroethene	75-35-4	0.00	61.00	O	ND	1.7		
11	1,1,2- Cl 1,2,2- Flethane (113		0.00	151.00	0	סא	1.7		
12	Methylene Chloride	75-09-2	0.00	84.00	0	· ND	1.7		
13	1, 1-dichloroethane	, 75-34-3	0.00	63.00	. 0	ND	1.7		
14	Methyl t-butyl ether (MTBE)	1834-04-4	0.00	73.00	. 0	ND	1.7		
15	cis-1,2-Dichlorosthene	156-59-2	0.00	61.00	٥	ND	1.7		
	1	(50-58-2	9.74	130.00	-	51.4	•.•	123%	
16	Bromochloromethane (SS) Chloroform	67.00.0	10.03		238129	3.7	1.7	12376	
17		67-86-3		83.00	69072		1.7		
18	1,1,1-Trichloroethane	71-55-6	0.00	97.00	0	ND	1.7		
19	1,2-Dichloroethane	107-06-2	0.00	62.00	0	ND			
20	Carbon tetrachloride	56-23-5	0.00	117.00	0	ND	1.7		
21	Benzene	71-43-2	11.23	78.00	53706	2.3	1.7		
22	1,4-Diffuorobenzene (SS)		11.81	114.00	1057182	58.1		116%	
23	Trichloroethene	79-01-6	0.00	130.00	O	ND	1.7		
24	1,2-dichloropropane	<b>78-87-5</b>	0.00	63.00	0	ND	1.7		
25	cis-1,3-dichloropropene	542-75-6	0.00	75.00	0	DN	1.7		
26	Toluene	108-88-3	14 22	91.00	48210	1.7	1.7		
	trans-1,3-dichloropropene	10061-02-6	0.00	75.00	0	ND	1.7		
28	1,1,2-Trichloroethane	79-00-5	0.00	97.00	0	ND	1.7		
29	Tetrachioroethene	127-18 <del>-4</del>	15.35	164,00	27134	2.7	1.7		
30	1,2-Dibromoethane	106-93-4	0.00	107.00	0	DM	1.7		
31	Chlorobenzene	108-90-7	0.00	112,00	C	ND	1.7		
32	Ethyl benzene	100-41-4	16.89	91.00	23711	ND	1.7		
33	m.p-Xylene	1330-20-7	16.89	91.00	23711	ND	1.7		
34	o-Xylene	95-47-8	17,42	91.00	10061	ND	1.7		
35	Styrene	100-42-5	0.00	104.00	σ	ND	1.7		
36	1, 1.2.2-Tetrachicroethane	79-34-5	0.00	83.00	0	ND	1.7		
	Bromofluorobenzene (SS)		17.95	95.00	352312	43.7		87%	
	1,3,5-Trimethylbenzene	108-67-8	0.00	105.00	0	ND	1.7		
	1,2,4-Trimethylbenzene	95-53-6	0.00	105.00	Ö	ND	1.7		
	1.3-Dichlorobenzene	541-73-1	0.00	146.00	ő	ND	1.7		
	Benzyl chloride	100-44-7	0.00	91.00	Ö	מא	1.7		
	1,4-Dichlorobenzene	106-46-7	0.00	145.00	ū	ND	1.7		
	1,2-Dichlorobenzene	95-50-1	0.00	148.00	o	ND	1,7		
	1,2,4-Trichlorobenzene	120-82-1	0.00	180.00	0	ND	1.7		
	Hexachlorobutadiene	87-68-3	0.00	225.00	o	ND	1.7		
		Traceable Standard					1+1		
	•		. Upmidel.	UPCLUB!					
•	,	920_20C.D	D	'M 4500"		0_30C.D			
	vacringgi. W	17/00 10:19 AM	Report: 1	ションスピー	ノヘレン				

ND \* Not Detected at the Reporting Limits. SS \* Surrogate Standard, IS \* Internal Standard 50 ng each Col:SPB-1 Fused Silica: 30m x 0.25mm, 0.25m film; direct interface; -50C for 2 min to 150 @ 8/m; 35-300 amu full scan Nutsch: -5C Tenax/Anasorb 747 Trap, desorb @ 180C; TO14/15\_lci.

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets "

Autosempler: 16 Dil. Fact: 1.7 Sample: Philip 197504 Sevenson/Olin 9/29/00 500mL; can 12488; S. Side of Debris Area 5970MS01 Misc: C-VHPCHEM\1\92000\ 1422257.D Reporting Method: 92000IS File: Limits IS/Surr. CAS# R.T. Q ion ppby ppby Recovery Area Cmpd # Compound 100% 16.07 117.00 906384 50.0 Chlorobenzene-d5 (IŞ) 2.22 85.00 16214 ND 0.8 75-71-8 2 Dichlorodifluoromethane (12) 0 ND 0.8 52.00 3 Chloromethane 74-87-3 0.00 0 ND 0.5 1.2--CI- 1.1.2.2-F ethane (114) 78-14-2 0.00 85.00 4 0.00 0 ND 0.8 75-01-4 62.00 5 Vinyl chloride ٥ ND 0.8 1,3-Butadiene 106-99-0 0.00 54.00 6 0 0.8 7 Bromomethane 74-83-9 0.00 94.00 ND 0 ND 0.8 75-00-3 0.00 64.00 8 Chloroethane 0.00 0 ND 0.8 Trichlorofluoromethane (11) 75-69-4 101.00 8 0 ND 0.8 1.1-Dichloroethene 75-35-4 0.00 61.00 10 0 ND 0.8 1,1,2- CI 1,2,2- Fjethane (113) 76-13-1 00.0 151.00 11 0 ND 0.8 Methylene Chloride 75-09-2 0.00 84.00 12 0 0.8 1,1-dichloroethane 0.00 ND 75-34-3 63.00 13 Ö ND 0.8 Methyl t-butyl ether (MTBE) 1634-04-4 0.00 73.00 14 0 ND 0.8 158-59-2 0.00 61.00 15 cis-1,2-Dichloroethene 260300 55.2 110% 9.76 130.00 18 Bromochloromethane (SS) 0.8 67-66-3 0.00 83.00 0 ND 17 Chloroform 71-55-6 0.00 97.00 0 ND 8.0 1.1.1-Trichloroethane 18 0.00 0 ND 0.8 107-06-2 62.00 19 1,2-Dichlomethahe ND 0.8 56-23-5 0.00 117.00 0 20 Carbon tetrachionide 0.8 71-43-2 11.23 78.00 77557 1.4 21 Benzene 22 1.4-Diffuorobenzene (\$\$) 11.81 114.00 1358614 61.4 123% 23 Trichloroethene 79-01-6 0.00 130.00 0 ND 0.8 0.00 0 ND 0.8 24 1,2-dichloropropane 78-87-5 63.00 0 NO 25 cis-1,3-dichloropropene 542-75-6 0.00 75.00 0.8 88281 26 Toluene 108-88-3 14.22 91.00 1.3 0.8 trans-1.3-dichloropropene 27 10061-02-6 0.00 75.00 0 ND 0.8 28 1.1.2-Trichloroethane 79-00-5 0.00 97.00 Ū ND 0.8 29 Tetrachioroethene 127-18-4 0.00 164.00 0 ND 0.8 30 1,2-Dibromoethane 106-93-4 0.00 107.00 0 ND 0.8 0.00 112.00 0 ND 0.8 31 Chlorobenzene 108-90-7 ND 0.8 32 Ethyl benzene 100-41-4 16 68 91.00 12889 0.8 33 m.p-Xylene 1330-20-7 16.91 91.00 38816 ND 34 o-Xylene 95-47-6 17.42 91.00 14993 ND 0.8 35 Styrene 100-42-5 0.00 104.00 0 ND 0.8 38 1,1,2.2-Tetrachioroethane 79-34-5 0.00 83.00 0 ND 0.8 17.97 81% 37 Bromofluorobenzene (SS) 95.00 396760 40.5 38 1,3.5-Trimethylbenzene 108-67-8 19.11 105.00 13649 ND 0.8 105.00 12969 0.8 39 1,2,4-Trimethylbenzene 19.83 ND 95-63-6 40 1,3-Dichlorobenzene 541-73-1 0.00 146.00 NO 0.8 0 Benzyl chloride 0.00 ND 8.0 41 100-44-7 91.00 0 42 1,4-Dichlorobenzene 108-46-7 0.00 146.00 0 ND 0.8 43 1.2-Dichlorobenzene 95-50-1 0.00 146.00 0 ND 0.8 44 1,2,4-Trichlorobenzene 120-82-1 0.00 180.00 0 ND 0.8 45 Hexachlorobutadiene 87-68-3 0.00 225.00 0 ND 0.8 Calibration Data: NIST Traceable Standard Cylinder: Spectra Gases L69236, 1ppmv 920\_58.D 920 10D.D 920\_20C.D 920\_30C.D Date Printed: 10/17/00:10:20 AM Report: TO-15RPT3.XLS

ND = Not Detected at the Reporting Limits SS = Surrogate Standard; IS = Internal Standard 50 ng each
ColtSPB-1 Fused Silicat 30m x 0.25mm, 0.25mm, 0.25m film; direct interface: -50C for 2 min to 150 @ 8/m, 35-300 amu full scan

Nutech: -5C TensylAnesorb 747 Trap. desorb @ 180C; TO14/15\_lcl

<sup>&</sup>quot;Note that 1,3-butadiene and MTBE are TO-15 compounds only and not TO-14 targets."

\$100 Brownleigh Drive, Suite 120 Raleigh, NC 27617



919 510-0228 Telephone

919 570-0141 Fax

Web Site: www.rtp-labs.com

#### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Mass Spectral Library

Client: Philip Environmental Services

Contact: Jim Jacklin Project No: 197504

Sample Date: 9/28/2000

Matrix: Air in Summa Canister

Analysis Dute: 10/12/2000

Date Received: 10/9/2000

Sample ID:

1422250 canister 11344 "North Side of Biocell" 9/28/00 1730 hours

Estimated ppbv\* Compound No TICs Detected Sample ID: 1422251 canister 93242 "S. Side Bio Cell" Compound Estimated ppbv\* No TICs Detected Sample ID: 1422252 canister 11412"N. Side Debris Area" Compound Estimated ppbv\* No TICs Detected Sample ID: 1#22253 canister 0183 "S. Side Debris Area" Compound Estimated ppbv"

No TICs Detected

\*Estimated values were calculated against the d<sub>f</sub>-Chlorobenzene internal standard assuming a 1:1 response ratio.

File: 197504.doc/als

\$100 Brownleigh Drive, Suite 120 Raleigh, NC 27617



919 510-0228 Telephone 919 510-0141 Fax

Web Site: www.rtp-labs.com

#### TENTATIVELY IDENTIFIED COMPOUNDS NIST/EPA 75,000 Mass Spectral Library

Client: Philip Environmental Services Contact: Jim Jacklin

Project No: 197504

Sample Date: 9/29/2000

Matrix: Air in Summa Canister

Dankfrad bearing	71 £ 31 2 G G G	TARBOT DOS UNY PARAMETER PARTITIONE	•
Analysis Date:	10/12/2000	Date Received: 10/9/2000	
Sample ID:	1422254 canister	920454 "North Side of Biocell" 9/29/0	00 1730 hours
Compossed		Estimated ppby*	•
		A CONTRACTOR OF THE PROPERTY O	
No TKCs Detects	d		
Sample ID:	1422255 canister	92025 "S. Side Bio Cell"	
Compound		Estimated ppbv*	
Acctone	<b>1</b>	45	
Butsnal		17	
3-methyl-2-proper	ned l	32	
Methyl Isobutyl K	cione	25	
1-bromo-3-methy		25	
Nitrocyclobecane		14	
3-Henen-2-one	<u> </u>	56	
Sample ID:	   422256 canister 5	3178 "N. Side Debris Area"	
Compound		Estimated ppbv*	
No TICs Detecte	<b>d</b>		
Sample ID:	422257 canister 1	2483 "S. Side Debris Area"	
Compound	!	Estimated ppbv*	
No TICs Detecte	: d		

<sup>\*</sup>Estimated values were calculated against the  $d_f$ -Chlorobenzene internal standard assuming a 1:1 response ratio. File: 197504.doc/als

Research Triangle Park Laboratories, Inc 8100 Brownleigh Drive, Suite 120 Releigh, North Carolina 27617 (new zipcode) Phone: 919-510-0228 Fax: 919-510-0141 Web Site: www.rtp-labs.com

# Chain of Custody Record

ISO 17025 Compliant for Testing Labs



TOTAL P. 02

197504

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Sample ID No. and Descripti	ion Date	Time	Mairix Air <u>, Liq, Solid</u>	Pres	# of	ナーで	***			Commen	ıts	Fraction
11344 N. Sipe Bu	cell 9-26	1730	Air	No	1	*	~	.]	]			
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183 5. JOL DEGRIS A	~ ~ ~ ~ v	1730	•	<u>                                     </u>		$\rightarrow$	<u> </u>	<u> </u>				
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2025 5. Sinc Bio C	E(( )					<b>&gt;</b> <				Andrew and a state of the state		
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